THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

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## Farm Husbandry

### MAKING AND PRESERVING MANURE.

Few things are more stale than the popular talk about making and preserving manure. Every practical man thinks that he understands the art to perfection; and every babbler in chemical jargon believes that he has attained to the fifth story of rural science when he repeats in fair parrot imitation, the words of Johnston, Liebig, Boussingault and other standard authors. In all this, there is a lack of vigorous, independent reasoning, and of original research, which we can not commend. Let us arouse ourselves to the task of making a little investigation which is not the reproduction of other men's thoughts and language, but our own by legitimate paternity.

Why is the carcass of a dead sheep which contains thirty pounds of dry matter, better for manure than a like weight of dry grass or other herbage, similar in kind to that consumed by the animal to form its flesh, bones, brain and nerves? This is a plain and important question; and one that every farmer's son who is twelve years old should be able to answer correctly, in a moment. Give us the true explanation of this phenomenon, and we will proceed a step farther in the same direction. The solution of the problem is this: The atoms in the carcass of a sheep which weigh but thirty pounds have been extracted during the growth of the animal, from a small beginning up to full maturity from at least 2,000 pounds of grass or other forage. No 300 pounds of dry hay contain the same quantity of phosphate of lime, sulphur and organized nitrogen, which exists in the carcass named. But this fact would be of no importance, if it were not for another, which is almost universally overlooked in collecting and preserving fertilizers. To bring it out fairly, permit as to inquire: why a pound of bone-earth, (phosphate of lime,) or a pound of available sulphur, or one of nitrogen, is worth more as a manure than a like weight of carbon, pure lime, or oxygen? In a pound of wheat or corn, there is ten times more carbon and oxygen than of phosphorus, nitrogen or sulphur. Why then should the last named elementary bodies be so useful, and peculiarly valuable as food for corn and wheat plants? There are two reasons for this. One is, the extreme scarcity of salts of phosphorus and sulphur, and of available nitrogen, in old, well drained fields, which have been often plowed. The other, and more noticeable reason is, the almost universal ignorance that prevails throughout the country in relation to elementary substances in soils, without which not the first kernel of corn or wheat can grow. Every body knows that all kinds of matter in the earth will not do to make bread of; nor will every thing do to make into grass or potatoes. If 100 pounds of common sand, clay, iron or lime would form by any tillage an equal weight of human food, we could all live with little labor and without cultivated reason. A snake can live comfortably in a cage a whole year on a single meal. If our race could thus subsist, we should not be the industrious, inventive, moral and improving beings we now are.

The time is coming when every child must be taught a knowledge of the things and laws which its Creator has appointed to transform *simple minerals into good bread*, by the harmonious union of science and physical labor. At present this knowledge is despised; these elements of bread are thrown away; and the natural productiveness of our parent earth is assailed by four or five millions of powerful semi-civilized men, who are eagerly running a race to see who shall coin into grain, tobacco, cotton and other crops, the most of the virgin soil, for exportation and loss to the country. More of the valuable elements of corn and cotton is wasted through ignorance in raising those great staples than is consumed in organizing the same. In this remark allusion is made to the dissolved vegetable and animal mold in soils, and their incombustible salts, which never enter into the composition of the plants in cultivation, but are lost, partly by evaporation, and partly by washing and leaching. When tillage decomposes mold and inorganic matter, if no vegetables are growing to imbibe tho volatile and soluble elements of crops, they are apt to be lost.

We now return to the consideration of the art of making and preserving manure. Any element, or substance, which can aid in making a ripe and perfect wheat plant, is a fertilizer. Fertilizers or manures exist in nature in two distinct conditions. The one is, in that of organized atoms, as we see them arranged in the tissues of vegetables—in their seeds and tubers—as in wheat and potatoes; and as we find them in lean meat, fat, brain, bones and membranes. The other condition is that, in which the elements of plants and animals are wholly disorganized, or *mineralized*. For illustration: a slice of

bread, a potato and a beef-steak are fertilizers in an organized form. Burn these completely, and the water, air and ashes into which they will be transformed by combustion, are to all intents, and for all purposes in nature, *minerals*. They will combine chemically with metals and earths, and exist for indefinite centuries as solid unchanging rocks. To make and preserve manure, implies the skillful collection and husbanding of the elements of bread and meat, both in their mineral and in their organized state, as in the dung and urine of animals, in common vegetable mold, in salts of lime, potash, silica, soda, magnesia, iron and alumina.

In order to collect and preserve the elements of human food and clothing to the best advantage, the operator should have a clear idea of the natural process by which both plants and animals *grow*, come to maturity, die, and are dissolved into their original elements, preparatory for a new organization. In a study so wide as this, we can only serve as a guide-board to point the way. Know then this truth, that no animal from man down to the fish and worm, can subsist on disorganized matter, like the gases, vapor and ash of a loaf of bread, when entirely consumed by fire, or fully decomposed by fermentation and rotting. These elements of bread can only be *re*-organized by a living plant under the influence of solar light, heat and electricity. From this it follows, that plants are older on our planet than animals; and that if all vegetation were to cease for a few years, all animals must inevitably perish. Plants may have flourished for ages on the globe before an insect or molusca was created; but as all animals mineralize their food, not completely, but in a degree, and cannot live on the carbonic acid which they all form, it follows that, without plants to decompound this carbonic acid, and reorganize its constituent atoms, to serve again as food for animals, they would soon become extinct, from the lack of nutriment.

The works of God are full of interest. They are unfolded in a peculiar manner before the vision of an intelligent, reasoning farmer. He cannot fail to notice the wonderful proclivity of all living things, whether vegetable or animal, to multiply in number, and gain, at the expense of the mineral kingdom, in the aggregate weight of organized matter on our given area of land. It is the every day business of the husbandman to organize the most useful plants and animals out of the atoms which Providence has appointed for that purpose. Has God made provision for the large increase of these through the instrumentality of that talking, reasoning biped, on any little spot of the earth's surface, which by courtesy is called a farm? If a larger weight of plants and of animals, can live on thy farm, kind reader, than it has at this time, think for a moment, and tell me where thou wilt get the food, the manure, to be organized into more grass, grain, roots, wool, mutton, milk and beef? These things have a market value. Providence favors their increase in thy hands; but thou, strange lump of contradictions, wilt not extract pure gold from the subsoil and the atmosphere. Thou art regardless of its loss from the vault of the privy, the pig-stye—the barn yard in winter and the cow yard in summer. Thy heart lusteth for more land, when thou hast so much already, that no acre of it yields two-thirds of its maximum. Thou hast not duly tested the advantages of soiling cows, nor the benefit of deep tilth, of close planting and seeding. Spires of grass stand too far apart on thy pastures and on thy meadows. Some of these fields can be improved by turning little rivulets over them for irrigation. Others need draining, and a coat of caustic lime to sweeten the sour muck and neutralize the mineral acids. Manure derived from cat-tails and bull-rushes is worth something; but that which clover and peas draw from the earth is worth five times more, pound for pound. One hundred pounds of rye, harrowed into the earth in a cornfield at the maturity of the crop, has organized more than a ton of fertilizers by April, to be plowed in, and feed a summer crop. For ewes with lamb, or while nursing their offspiring, a moderate allowance of green rye early in the spring, is capital. Have valuable plants always growing the year round, so far as you can, on every rod of land, to feed domestic animals, unless it is thought best to sell the crops. To make the most out of vegetable vitality, it must ever be kept at work accumulating manure, which should all be saved *somewhere*. A pea can work wonders in the way of storing up fertilizers in an available form. A carrot seed has a gift in the same line; but the little clover seed is a perfect gem. Small as it is, the growing plant can not live on air alone. It consumes a good deal of sulphur and often requires gypsum to supply it.

Good farmers at the South make great use of forest leaves and leached ashes in their compost heaps. These leaves are generally rich in potash and other earthy salts as well as in organic matter.

Suppose you raise sheep for their wool, meat and tallow and sell them when three years old. The manure that can be made by a sheep in three years, with the aid of good plants to draw minerals from the subsoil and gases from the atmosphere, will be about equal to the production of food for two sheep at the end of the term. Nothing is plainer than the fact that, organized matter consumed and voided by a sheep will greatly favor the growth of food for another animal. And, although about 60 per cent. of the matter eaten, escapes from the lungs in the form of carbonic acid and vapor, and through the pores of the skin by insensible perspiration, yet the other 40 per cent. voided by the bowels and kidneys, adds more to the soil in the way of mold than was probably consumed in making the plants fed to the sheep. The quantity of mold dissolved in organizing a crop, is very unequal. It is a point in rural affairs, which we have studied with some care. On another occasion we will attempt to elucidate the laws which govern its consumption and increase, on both tilled and untilled land.

Rural industry is very generally spread over too much surface, to be profitable in the highest degree. This occasions a great waste of travel in man and beast. It also leads to a bad system of husbandry by robbing remote fields of their fertilizing atoms, not a few of which cows and other domestic animals drop in the highway. A farm being a sort of chemical laboratory, it is miserable economy to have it ten times larger than one has any use for. Less land, and more money drawing 7 per cent. annual interest, which will double the principal in 10¼ years, would be an improvement in the circumstances of more than one reader of this journal.

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DAIRY COWS.—The excellency of a dairy cow is estimated by the quantity and quality of her milk. The grand desideratum is to discover a breed alike useful to the grazier, dairyman, and small farmer.

## BASTARD FALLOWS.

THE system of making summer fallows, by allowing land to lay a whole year in a naked and unproductive state, for the purpose of preparing it for autumn wheat, is extensively practiced in all the wheat growing districts of the United States. The process of making naked fallows, when the loss of a whole year's rent of land—or interest on the value thereof—is taken into account, under the most favorable circumstances is expensive, and may be in most cases dispensed with, without in the most trifling degree detracting from the annual productiveness of the soil. If this proposition can be sustained *in practice*, by the entire mass of the wheat growers of our country, then may the over populated portions of Europe have confidence in being able at all times to get a supply of bread stuffs from America.

Naked fallows are expensive and useless, and that a much more profitable system of managing land for fall wheat can be adopted, are opinions which are gaining ground, and are believed by many of the most enlightened cultivators of this country. The great bulk of the farmers, however, have not given the subject much consideration, nor do they yet understand the best and cheapest method of keeping up the fertility of their soil, and at the same time, increasing its annual products without subjecting their land, in periods of four or five years, and in some instances much more frequently, to the old fashioned and extravagant practice of summer fallows. With a view of promoting the interests of agriculture, an attempt will be made by the writer, to minutely discuss the subject in all its bearings, during the succeeding six or eight numbers of the Farmer.

The ordinary practice of making fallows cost at least eight dollars per acre; in this calculation is included the rent of land a twelve month, and the plowing and harrowing required to bring the land into a clean state of culture. The expense of manuring, draining, laying the ground into ridges, and seed, &c., would be the same in one case as the other, and therefore on the score of expenditure or economy need not be included in the calculation. In the term *bastard fallows* may be included the various modes of preparing land for fall wheat by which the loss of a whole summer or crop is not required to effect that object. It has already been shown that if land be summer fallowed, a direct charge of about eight dollars per acre must be put against the wheat crop, and as will be presently proved to the satisfaction of every reflective mind, without affording an equivalent return for such an extravagant outlay. The system proposed to be practiced will be based upon the soundest principles of economy, nor will it require a large capital to carry it out throughout the various ramifications of a well managed arable farm. One of the most important features of the system is this: the green or other crop grown upon the land with a view of preparing it for fall wheat will be of such a description, and grown upon such a scale, that in most cases the proceeds thereof will pay the rent of land and the entire expense of managing both the summer and winter crops—thus leaving the latter clear profit to the cultivator. The average yield of wheat, extending over a period of ten or fifteen years, on the best managed wheat farms in this country does not exceed thirty bushels per acre. Now, it is quite certain that even when this high average is obtained by superior cultivation and by the aid of naked fallows, quite as great a yield of wheat may be had without summer fallowing the land as with it, and therefore, why should such a practice be longer tolerated by American farmers. The Chinese, who are noted for the superiority of their Agriculture, have not found it difficult to keep up the fertility of their soil by annually growing heavy crops, without giving it any rest. In the best cultivated portions of England farms and even whole parishes are in great abundance in which the yield of wheat, extending over a long period of years has equalled forty bushels per acre, and during the whole course of cropping a naked fallow has not been made. Indeed, the enlightened and scientific portion of the farmers of Great Britain have long since exploded the semi-barbarous practice of making naked fallows, and there appears to be no valid reason, why a similar view of this important question should not be favorably received by the wheat growing farmers of America. To enlighten public opinion regarding the various systems of cultivation adapted to secure this object, and at the same time keeping in mind the climate, soil, the high price of labor, scarcity of capital to be employed in agriculture as compared with Great Britain and some portions of the continent of Europe, and other prominent features that have an influence to a greater or less degree upon the character of American Agriculture, are the real grounds that have induced the writer to take a bold stand in discussing this somewhat intricate subject, which in many of its features will be found opposed to the practice of many of our very best farmers, with whom on many other points of husbandry we perfectly agree, and the contributions of whose pens we shall be pleased to receive, on this or other subjects, whether their opinions and practice correspond with ours or not. Without further prefatory remarks, we shall briefly at this time take up the subject in a *tangible* point of view, and in our next resume it in several of its *practical* bearings.

## INDIAN CORN.

The maize plant may be profitably cultivated in nearly every portion of this great Republic. In the most northern sections, where it is grown as a preparative crop for fall wheat, an early variety should be selected, and by liberally manuring the land, and clean culture, it may be pushed forward to full maturity by the first week in September, after which it should be cut up and drawn off, and the land plowed and prepared for fall wheat. By planting the hills of corn in rows about four feet apart both ways, and by passing the steel tooth cultivator twice in each direction between those rows, the land will be in as good a condition for fall wheat as if it had been summer fallowed. Besides, the manure applied to the land for the corn crop will have passed through its various stages of fermentation, and the juices having been partially absorbed or extracted in giving strength and vigor to the maize plants, there need be but little apprehension on the score of having a fallen or rusted crop, as would probably have been the case had the manure been applied to the land whilst being summer fallowed. This influence however operates only on soils where there is a great depth of decayed vegetable matter on the surface, and where a strong and luxuriant growth of straw is produced without extraordinary means being used to secure that result. There are but few soils on which unfermented barn-yard

manure can be applied immediately before the sowing of wheat, without doing more or less injury to that crop. On soils where this is not the case, it will be found that *human* or vegetable mold forms a very small proportion of their ingredients, and doubtless on soils of this kind, crude and unfermented barnyard manure may be applied without producing the foregoing results. In those cases where vegetable deposits form a small proportion of the active soil, unfermented barn yard manure, buried in the soil to a depth of six or nine inches with the plow, will aid materially in bringing into action such inert properties as will promote a vigorous growth of plants and vegetables. Manure thus applied has a powerful mechanical action on soils, and the beneficial or prejudicial influence produced, may be attributed as much to this agency as to that of affording a direct supply of food for their sustenance.

The mechanical action of manures on soils, of course greatly depend upon the quality and condition of the soils on which they are intended to act. This fact should be duly considered in connection with the manuring of land for the wheat crop. The wheat plant is decidedly the most precarious to cultivate, of the cereal plants, and hence a greater degree of judgment should be employed by those who engage extensively in its cultivation. In northern Europe, the heat of summer is less severe than in the same degree of latitude on this continent, and consequently a much longer period is given the wheat crop to mature and ripen, and hence the disease known among us by the appellation of *rust*, is scarcely known in the best wheat growing districts of Europe. It is well known by all wheat growers, that cool dry weather during the month of July, and up to the period of wheat harvest — or from the time that the wheat plants come into ear, until they arrive to full maturity — is most favorable for an abundant harvest of wheat. Such weather has just the opposite influence with Indian Corn and most of the other cereal plants. The cause of this somewhat strange phenomenon, may be tolerably correctly reconciled by examining the peculiar habits and constitution of the wheat plant. A minute enquiry into this matter, will probably be made in discussing another branch of this subject—and in the mean time the fact should be remembered, that the plants of wheat have strong roots, which strike to a great deph into the ground, and send forth an abundant supply of food through the sap vessels, which impart either a healthy or sickly growth, just in ratio with its quality and adaptation for this class of plants. Warm humid weather is the most favorable for a vigorous growth of plants, and vegetables—when weather of this kind prevails to a considerable extent, between the periods that the wheat crop comes into ear and ripens, the consequence will be a strong growth of straw, and probably disease. The disease produced from the foregoing peculiar state of the atmosphere would be either mildew or rust. The latter, by far the most prevalent on this continent, is mainly engendered by too great a flow of juices or food through the sap vessels of the wheat plants. The outer covering of the straw being of very weak structure, when the sap vessels become overcharged with food, rupture and premature decay immediately follows. The state of the atmosphere and climate doubtless has much to do in effecting this work, but the soil also has a great influence, in preventing or promoting this disease. It is for this reason that Indian Corn may be profitably grown as a preparative crop for either fall or spring wheat.

The manure applied to the soil for the corn crop, will have undergone a thorough state of fermentation during the process of cultivation, and as the maize plant requires a different quality of food to bring it forward to maturity than is required by the wheat plant, the latter will be more apt to be free from disease, if sown after a well cultivated crop of Indian Corn, than if the land had been summer fallowed purposely for that crop. A clover or timothy sod well plowed, and liberally manured, is the best possible state that the soil can be in for Indian Corn. If the hills be planted in rows four feet apart both ways, there will be no difficulty in cultivating this crop entirely with the horse cultivator, and shovel plow. By the free use of those implements the ground may be made as clean as if it had been summer fallowed, and besides the profit of the corn crop will pay the whole expense incurred in the cultivation and management of the wheat crop.

An acre of Indian Corn managed in the manner proposed, will yield in an average of cases upwards of 40 bushels of marketable grain per acre. This at the lowest calculation is worth 50 cents per bushel, as an article of export, which, in addition to the corn stalks for winter provender for horned cattle, would give a net profit of twelve dollars per acre. When it is intended to sow wheat after corn, the latter crop should in all cases be harvested and drawn off the ground, a short time before the crop is thoroughly ripe, by which means more time will be given to prepare the land for the wheat crop, and the fodder will also be much more valuable than if allowed to get dead ripe before being harvested. When the proper season arrives for the practical operations on the farm, suited for the cultivation of the maize plant, full directions will be given, for the proper performance of the business in all its details.

In our next issue, the cultivation of the clover plant as a preparative crop for fall wheat will probably receive attention at our hands.

### UNSEASONABLE WEATHER.

The past month (December) has been seven degrees warmer in Philadelphia and farther south, than any previous December in 57 years. This high temperature, (now the 16th January, it is up to summer heat,) in Augusta, Ga., has caused a good deal of vegetable and animal matter to decompose in this warm climate, and induced Cholera and other bilious diseases. Very few duly appreciate how large a portion of sickness in the United States springs directly or indirectly, from noxious gases diffused in the water drank, or the air inhaled into the lungs. Farmers are nowhere particular enough to collect all the volatile and soluble elements of plants and animal excretions, which are lost in rivulets and poison the atmosphere, and use them as manure, by fixing them in the surface soil. A dead sheep cut up and buried a small distance under loam or earth will not smell offensively, because the soil condenses and holds for a time at least the mephitic gases. In all cities there is a prodigious waste of most concentrated and valuable fertilizers, which too often breed pestilence. Charcoal, leached ashes and gypsum mixed with night soil will do wonders on all crops. The winter is a good season to collect the raw material for abundant harvests. Study the deficiencies in the land, and remedy the same.

## THE PLOW—ITS HISTORY AND IMPROVEMENTS.

BY HORACE L. EMERY.

It has been well said that "the history of the plow is the history of civilization—that the progress of its improvement marks the progress of society." Thinking that a few remarks upon, and facts concerning the past and present condition of the plow, with a description of several of the most approved forms now in use, showing their adaptation to the various soils, modes of culture, &c., &c., might not be uninteresting to many of your readers, I offer you herewith a short communication upon the subject—hoping to be able to complete the article in your next number. I intend to show, by the use of several new cuts, the various forms of mould boards, and the difference in the effect produced by them, both in the same and different soils; also the effect of different construction of the wood work, the various modes of attaching the team, and the comparative cost and simplicity of the same.

One of the first improvements upon the original plow, or straight-pointed stick of wood, drawn through the ground by manual power, was the substitution of the crotch of a tree, drawn by being attached to the tail of an ox—afterwards, however, by being attached to the horns, which last method is still extant in some countries. From that era in the history of the Plow, it has gradually received more and more attention as its importance has become known; but until within the nineteenth century the implement has been rude and imperfect, as compared with our modern plows.

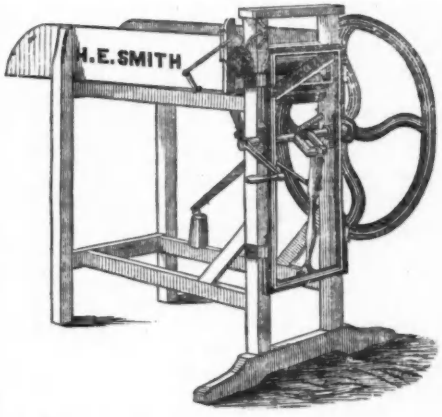
I remember when mould-boards of plows were made from the trunks of winding trees, cut into pieces of proper length and split through the middle, the face of each half thus forming a regular winding surface. These sticks were then wrought from the other side until a proper thickness was obtained—the winding surface being preserved, formed the mould-board. These mould-boards were then covered with strips of wrought iron and furnished with wrougnt iron and steel edge coulters and points. The beams and handles were similar to those of modern plows, excepting that the handles were made with natural crooks for the top, by using the stumps of oak trees, and a portion of the root near the surface of the ground, which were obtained with much labor; and, instead of a clevis on the end of the beam, a staple was driven into the side, by which it was drawn.

In making this kind of plows nearly the same process is gone through in each one as in the making of a pattern. Uniformity in their construction was not thought of—in fact, almost every plow was made to order, according to the peculiar notions of the purchaser. As for repairs, they were made according to the ability of the blacksmith, and nearly as often as repaired the plow would be quite altered—sometimes for the better and sometimes for the worse. A good plow maker in those days could obtain $12 to $16 for a plow of the size now sold for half the sum.

One great step forward from the last described, was the substitution of cast iron for the wearing parts in separate pieces, so as to be replaced when worn or broken—thereby preserving the original form, strength and durability, and at the same time effectually reducing the cost of repairs. The honor of this is generally accredited to Jethro Wood; at all events he obtained the first patent for this invention and improvement. In process of time he produced many patterns of plows, some of which are still highly esteemed for their simplicity and adaptation to some uses; but he, like most inventors, had much to contend against in introducing them to the public, and died without realizing due reward for his labors—although his heirs have, by a renewal of the patent, realized a handsome sum, yet it is now common property by its own limitations. Cast iron is now chiefly used for plows throughout this country, excepting in some portions of some of the Western States, where still plates are struck up in shapes and used for the mould boards.

The principal improvements which have been made in the plow, since Mr. Wood's, have been in its form—the composition of the metal, as regards its strength and hardness, the connection of the several parts of the same, and the mode of attaching the wood work to them; also in the manner of constructing the wood work as regards simplicity and uniformity, so that repairs for the wood are as easily made as for the irons, and with the same perfection. Great improvements have also been made in the manner of regulating and adapting the same plow to a greater variety of work.

The credit of these improvements belong to a great number of persons—among whom may be named Starbuck, Wright, Hitchcock, Hawkins, Emery, Rich, Nourse, Minor, Prouty, Burrall and many others. Each of these men has added something new and useful in pattern, form, or construction, until the business of building of plows has become systematized and an immense amount of capital has been invested in it; and it now is as distinct a business of itself as carriage building. *Albany, N. Y.*, 1849.




SMITH'S HAY, STALK AND STRAW CUTTER.

The above engraving represents a Straw Cutter, invented and manufactured by H. E. Smith, of Fowlerville, N. Y. An examination and trial of this machine will, we think, satisfy any practical man that it is at least equal to many of the most celebrated cutters offered to the public. This is our impression, after seeing and handling Mr. S.'s machine. There are three sizes—the prices of which are $12, $13 and $14. They can be obtained of the manufacturer, as above, or of Rapalje & Briggs, E. Watts, and Barton & Belden, in this city. [A description of the machine was prepared for this number, but is necessarily deferred.]

## ANOTHER CHAPTER ON WIRE FENCE.

BY MYRON ADAMS.

MESSRS. EDITORS:—I did not say all I wished concerning Wire Fence in your January paper, because I am aware that short articles are much more acceptable to your readers than long ones. The fence there described is rather a fancy fence than a cheap one, being in front of my dwelling house, and in a very exposed situation. I am sensible that it is much more expensive than ordinary farm fences need be, but much cheaper for that particular place than any other I could make. I wished rather to present to the public what I had done, than untried theories of what I might do.

I find my fence the subject of some remarks in your last paper, and am well aware that the subject of wire for fencing is attracting much attention throughout the country. I think if Judge PETERS had waited until he had built the sample of wire fence he speaks of building, he would have found experience to have corrected somewhat his plan as laid down in your last paper. In the first place he would have found that there is no possible advantage of having a wire fence over four feet high, as no animal will attempt to jump it. The reason I suppose to be, that they do not see it until too near to jump. Nothing has ever attempted to jump mine, although it has been assaulted by every kind of animal that runs the street. They always expect to pass right through without hindrance or molestation, but the moment they strike the wires they recoil as if touched by an invisible hand. His manner of fastening the wires by passing them through holes in the posts, and driving in plugs, will not answer. I began my fence in the same way, but found whenever an animal run against it the wires slipped, and the fence was broken through. The number of wires, and their distances apart, are objectionable. If the object be merely to fence against horses and grown cattle three wires are as good as more. But if sheep and swine are to be restrained by it, nine wires at the distances I proposed will be found better adapted to the purpose. If animals get their heads through, they will break the wires if they are able.

I will now describe the manner I would build a common field fence. After having set the posts and braced them as described in the January number, I should place the coil of wire upon a reel and drawing out the end run it from one post to the other—having the same number of wires and distances apart as before described. After these were strained, I should take narrow strips of boards instead of those iron posts mentioned in the January number, and drive tenter hooks over the wires to keep them at their relative distances apart and from sagging. If the ground is of uniform descent, twenty rods is the distance I should place the posts apart, and this should constitute one pannel, separate and entire from the remainder. The object of this is in case of accidents it may the more easily be repaired. The next pannel might commence from the same post, but the wires should not be connected. I should think two men could build twenty rods of this fence in a day, after the wires had been prepared by boiling in oil. This is the cheapest way of building wire fence I could name. And yet I should prefer going to the expense of iron posts, as I have before described.

Those persons who build a wire fence in the cheapest possible manner, I fear will be discouraged, and throw it aside as worthless. Farmers ought to be content if they can build a durable fence, and one that answers every desirable purpose, for fifty cents a rod. Mine has been one of experiment from the outset, and I have tried almost every plan I have heard suggested. Before I had completed it in the manner described, it was frequently broken; but since, it has only been broken once, as before mentioned. Your reviewer is pleased to speak of it as offering no more resistance to an animal disposed to ramble than "the spider's most attenuated thread." With due deference to his opinion, permit me to say, that if he should witness the throng of starved village cows which roam our streets, and notice with what eagerness they eyed the apples just out of their reach, he would at least allow that this fence had *enchantment* about it. I know that this kind of fence is more liable to accidents on account of its being invisible. But this objection is in a great measure counterbalanced by suffering no damage from high winds, or forming no snow drifts beside it.

I will now describe my manner of mending it when broken, remarking, that nothing conveys a more vivid picture of complete ruin than a broken wire fence, as the wires recoil and twist up the whole length of the pannel. After loosening the wires at the windlass, I provide myself with a small furnace, such as is used in families for heating flat-irons—bring the ends together and heat them in the furnace, then flatten them for two or three inches, laying them together and winding with small wire. Then, by turning upon the cranks, the fence is brought to a standing position, and is repaired much quicker and at a less expense than a board fence could be. It will not answer to loop them together, as telegraph wires are united, as they always break in case of accidents when the wires are bent.

I should like to tell of the vibrations which a damp snow causes to the wires—of the sweet sounds which sink and swell through the air on a cold windy night—and of the cost of this kind of fence in comparison to other fences, if wire can be purchased as cheaply as stated by Judge PETERS—but have not time to say more at present. *East Bloomfield, N. Y., February*, 1849.

## DOOR YARD FENCE.

BY N. ALLEN.

A durable, and in many places a cheap door yard fence may be constructed as follows: Get rough stone as they come from the quarry, (3 feet long or more,) and set in the ground 18 or 20 inches. That part of the stone above ground should not be more than 8 inches square. Prepare casings as for wood posts, of uniform size, and sufficiently large that when well mitred together they can be put over the stone posts. At the proper height for the top and bottom rails, (to which the pickets are to be nailed,) mortice through the casings, and make tenons on the ends of the rails, long enough to pass through the casing, and admit a pin through the ends of them, in the inside of the cap. Set the cases over the stones, putting in the rails and pinning as you proceed. Then straighten your posts and rails, and raising the cases from the ground a few inches, proceed to fill up the cases to the top with small stones, taking care to put them in as closely as possible around the stone posts. Then cap your posts and upper rail to suit your own mind—but let it be done with taste. *Toledo, O., February*, 1849.

# Transmutation of Plants.

## WHEAT AND CHESS.

BY R. B. WARREN.

Much has been said, pro and con, for a few years past upon the metamorphosis of wheat to chess; and while some writers have denied the possibility of such a change, others have maintained with equal confidence that, under certain circumstances, such a change does take place. I am not at all surprised that many who have never given the subject a thorough investigation, but have taken *appearances* and the belief of their ancestors as law and gospel, should adhere to and advocate this doctrine, but I am surprised that any observing person should adhere to a doctrine which does not bear the test of experiment, and which is not supported by a solitary scientific fact or argument.

We shall look in vain through the whole vegetable kingdom for a parallel—the changes produced by cultivation—those witnessed in the Orchis and other tribes do not furnish it—for *varieties* only, and not new *Genera* and *Species*, are thus produced. Wheat and chess do not even belong to the same *Genus*, and if the theory of the transmutation of wheat to chess be admitted, it presents a solitary exception to the laws which govern the vegetable kingdom—an anomaly in the vegetable creation.

Perhaps by a little investigation we may arrive at the true state of the case, and satisfy ourselves whether this one anomalous circumstance does exist in the vegetable kingdom—whether wheat is ever metamorphosed to chess. Let us first premise that in no other known case does the metamorphosis extend beyond the production of *varieties* by cultivation, or by the admixture of the pollen of plants of *different species in the same genus*. Thus the pollen of the pumpkin will fecundate the seed of the squash, and the product will partake of the properties of both. The same may be said of the different varieties of apples, peaches, potatoes, corn, &c. But we never find varieties produced by the intermixture of the pollen of different *genera*, as of apples and pears, melons and pumpkins, or of Indian corn and broom corn. Indeed such changes rarely take place in different species of the same genus, and when they do, *varieties only, and not new species are produced*. We never discover any thing of the kind among the *Asters*, the *Solidagos* or the *Careces*; yet these are three of the largest genera of plants. If we plant a kernel of Indian corn we do not expect it to produce broom corn; neither do we look for oats or rye from wheat, yet, in fact, there is as much probability and possibility of such a change, as that wheat will change to chess. None of them belong to the same genus. Wheat belongs to the genus *Triticum*—rye, *Secale*—oats, *Avena*—chess, *Bromus*. But, say you, this metamorphosis may take place by changing the condition of the roots of the young plants, and without the agency of the pollen. In fact, this seems to be the general belief. A few words will expose the fallacy of this theory also.

Students of nature have in vain endeavored to determine by what process plants are enabled to absorb from the earth, and appropriate to their use only such elements as their particular organization requires, rejecting all others. We see the oak, sugar maple, chestnut, gensing, poison hemlock and deadly night-shade spring from the same soil and experience no fear that their proximity will cause the one to partake of the properties of the other; in whatever situation they grow we find their constituents the same.

Some have supposed that the form of the pores in the bark of the roots is such as to regulate the conditions of *endosmose* and *exosmose*, (flowing in and flowing out) of the ingredients held in solution by the moisture contained in the earth, which may be the case, although the phenomenon has by no means been fully and satisfactorily accounted for.

In order to account for the change of wheat to chess in this way, we must suppose that the form of the pores—the conditions of the *endosmose* and *exosmose*—by some unseen agency meet with a radical change, which is again contrary to all experience, and the only known exception to the laws which govern and regulate vegetation. Let the conditions be what they may, we nowhere else in nature find a parallel to this. Hence, we are almost irresistably forced to the conclusion that no such transmutation ever occurs, and shall be forced to concede the point if we can account for the presence of chess in any other manner, which we will endeavor to do in a few words.

Not only will chess vegetate, which has often been denied, but its vitality is not destroyed by lying in the ground several years. Hence experiments for testing the fact of its production from wheat, should be conducted with the utmost caution. It may be in the ground before the wheat is sown, and it is a well known fact that pigeons disgorge it from their crops, (and also other food) when they find any thing more palatable.

Farmers are often deceived as to the amount of chess contained in their seed wheat, and often that which is considered very clean, will contain two or three kernels of chess to each handfull of wheat, and, allowing this to cover two square yards of ground, we have at least one kernel of chess to every square yard of ground, and oftener three. Chess rarely winter-kills, it being much more hardy than wheat. In the fall of 1847 I planted sixteen kernels of wheat and sixteen kernels of chess side by side—only *three* roots of wheat survived the winter and came to maturity, whilst *thirteen* roots of the chess matured. Comment is needless.

It may be asked why so much more chess is found in fields of winter-killed wheat than in others, if wheat does not change to chess? I answer: where the wheat is killed the chess has abundant room to stool out—from 25 to 80 stalks often springing from one root. As many *roots* of chess may exist in a field of wheat which is not winter-killed, but not as many *stalks*, as the wheat prevents its stooling. These facts may be ascertained by any one who will take the trouble to investigate.

But the most conclusive argument against the theory, is the fact that those who have made careful experiments upon the subject, become convinced that no such change takes place—those who *sow* no chess *reap* none. *Alabama, N. Y., Feb.*, 1849.

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It has been eloquently remarked, that in the obscurity of the cottage, far from seduction of rank and affluence, is nursed the virtue which counteracts the decay of human institutions—the courage which defends the national independence—the industry which maintains all classes of the State.

## Meteorological Observations, &c.

### METEOROLOGICAL ABSTRACTS OF 1847 AND 1848.

BY LEANDER WETHERELL.

THESE years are placed in juxtaposition in order to present to the reader a comparative view of the last two years.

| | | | | | |
|---|---|---|---|---|---|
| Monthly mean temp. of | Jan. | 1847, 24.63; | do. | 1848, 30.66 |
| " " | Feb. | " 25.31; | do. | " 28.50 |
| " " | Mar. | " 28.44; | do. | " 32.25 |
| " " | April | " 41.42; | do. | " 44.70 |
| " " | May | " 58.27; | do. | " 59.72 |
| " " | June | " 61.94; | do. | " 67.63 |
| " " | July | " 71.76; | do. | " 69.23 |
| " " | Aug. | " 67.31; | do. | " 72.31 |
| " " | Sep. | " 53.48; | do. | " 56.20 |
| " " | Oct. | " 47.36; | do. | " 49.33 |
| " " | Nov. | " 41.05; | do. | " 35.81 |
| " " | Dec. | " 32.23; | do. | " 34.35 |
| Annual mean temp. of | | " 46.64; | do. | " 48.55 |
| Highest degree, | | " 95.00; | do. | " 94.00 |
| Lowest degree, | | " 0.00; | do. | " 0.00 |
| Greatest range, | | " 95.00; | do. | " 94.00 |
| Warmest day, | | " July 19; | do. | " Aug. 16 |
| Coldest day, | | " Feb. 23; | do. | " Jan. 10 |
| Wind — North, in | | " 14 days; | do. | " 17½ d'ys |
| " Northeast, | | " 32½ " | do. | " 24½ " |
| " East, | | " 8 " | do. | " 11½ " |
| " Southeast, | | " 38½ " | do. | " 33 " |
| " South, | | " 33¼ " | do. | " 23¾ " |
| " Southwest, | | " 68 " | do. | " 62½ " |
| " West, | | " 63 " | do. | " 67 " |
| " Northwest, | | " 102½ " | do. | " 126¼ " |
| Prevailing wind of | | " NW.; | do. | " NW. |
| Number of fair days in | | " 166½; | do. | " 183¾ |
| " cloudy days in | | " 198½; | do. | " 177¼ |
| " days on which rain fell, | | " 119 ; | do. | " 111 |
| " " " snow " | | " 56 ; | do. | " 57 |
| " " " rain & " " | | " 33 ; | do. | " 23 |
| Total fall of rain and snow, | | " 39.99 in. | do. | " 32.03 in |
| First frost in the autumn of | | " Sep. 16; | do. | " Sep. 27 |
| First snow in the autumn of | | " Oct. 11; | do. | " Sep. 22 |
| Robin first heard, | | " Mar. 22; | do. | " Mar. 3 |
| Bluebird first heard, | | " Mar. 28; | do. | " Mar. 3 |
| Maple in bloom, | | " Apr. 9; | do. | " Mar. 23 |
| Plum, peach, cherry, and apple in bloom, | | " May 15; | do. | " Apr. 24 |

These annual abstracts are carefully compiled and published yearly in the Genesee Farmer.

The monthly mean of each month is found by taking three daily observations; the first at sunrise, the second about 2 P. M., and the third one hour after sunset; these are added and divided by 3, which gives the daily mean; and the daily means at the end of each month are added and the sum divided by the number of days in the month. This process gives the monthly mean temperature. The annual mean is found by adding the daily means at the end of the year and dividing the sum by the number of days in the year.

The highest degree is the highest point to which the mercury in the thermometer rises during the year; the lowest, the lowest that it falls within the same period; and the range is the difference between these extremes. The wind in 1848 blew from the Northwest 126½ days — 26 days more than from the North, Northeast, East, Southeast, and South added together. The wind blew from the Southwest, West, and Northwest 256 days. This shows how greatly the westerly winds prevail over the easterly, over the locality where these observations are made.

The day is registered fair or cloudy according to the prevailing state of the atmosphere during each half day. However slight the sprinkle of rain, the day is set down as one on which rain fell, and so of snow. The snow is caught in a vessel during the snow season and melted, and then gauged: this added to the falls of rain, which are gauged, gives the total fall of water for the year in inches.

The greatest fall of water for any one month during the year 1848 was 6.16 inches—this was July: the least fall was in April — 78 hundredths of an inch; the warmest month, August; the coldest, February. The highest annual mean temperature of the last 14 years, 48.66 degrees—this was 1846: the lowest of the same period 43.71 degrees — making a range of 4.95 degrees. The highest degree of the thermometer, kept in the shade where there was a free circulation of air, and not exposed to reflected heat, within the above named period, 102 degrees—July 16th, 1845; and the lowest 8 below zero—February, 1836; making the greatest range of the thermometer 110 degrees. The greatest annual fall of water in 1847, 39.99 inches; and the least fall, 25.46 in. The annual average is near 35 inches. The greatest fall of water for any month within the above period, 6.79 — October, 1846; and the least in January, 1837—16-hundredths of an inch.

The year 1848 has few predecessors more marked for political changes; and these are not confined to the eastern continent alone, though much greater and more exciting there than here. It is memorable for the progress of the Cholera on the eastern continent, and also for its appearance in New York and New Orleans on the western just before its close. It was a year also which the husbandman will have as little cause to forget as the lover of liberty; for it crowned his toils and cares with abundant harvests.

### METEOROLOGICAL MEMORANDA.

The lowest degree of the mercury of each of the winter months in Rochester from Jan., 1835, to Feb. 17, 1849 :—

1835, Jan., 4 below zero; Feb., 7 below zero; Dec., 4 below zero.
1836, Jan., 2 above; Feb., 0 below; Dec., 3 above.
1837, Jan., 4 below; Feb., zero; Dec., 11 above.
1838, Jan., 5 above; Feb., 1 above; Dec., 1 above.
1839, Jan., 2 below; Feb., 1 above; Dec., 8 above.
1840, Jan., 2 below; Feb., 3 above; Dec., 5 above.
1841, Jan., 8 below; Feb., 1 above; Dec., 8 above.
1842, Jan., 5 above; Feb., 7 above; Dec., 10 above.
1843, Jan., 8 above; Feb., 6 below; Dec., 6 above.
1844, Jan., zero; Feb., 2 below; Dec., 6 above.
1845, Jan., zero; Feb., 3 above; Dec., 5 above.
1846, Jan., 4 above; Feb., 1 above; Dec., 14 above.
1847, Jan., 4 above; Feb., zero; Dec., 10 above,
1848, Jan., zero; Feb., 6 above; Dec., 12 above.
1849, Jan., 9 below; Feb., 7 below.

Jan. 12, 1849, shows the lowest fall of the mercury, here, on record.

The coldest day within the above period, was Friday, Feb. 16, 1849—the mean temperature of the day, from three observations, being 2¾° above zero. The record of the 16th of Jan., 1840, shows 3 deg. above zero, ¼ of a deg. higher than the cold Friday of 1849.

NOTE.—Saturday morning, Feb. 17; the mercury 7 deg. below zero at 7 o'clock A. M.; at 7½, 5 below; and at 8½, zero. This an hour and a half after sunrise, and a clear atmosphere.

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THE FEEDING OF ANIMALS should be regulated by a variety of considerations. The young who may be destined for maturity, should be supplied with milk from the dam until weaning-time. No food can be substituted for the well-filled udder of the parent, which is so safe, healthful and nutritious. —*Allen's Domestic Animals.*

THE G

WHEELER'S PATENT HORSE POWER AND THRESHER.

WHEELER'S HORSE POWER AND THRESHER—represented in the above engraving—is one of the best machines with which we are acquainted. One of them was exhibited, in operation, at the State Fair at Buffalo, and also at the last Fair in this county, and attracted much attention from farmers and others. For a farmer of comparatively limited means and business, we believe the purchase of Wheeler's Power and Thresher a very judicious and valuable investment. Indeed, in all cases where the strength of only one or two horses is required, and particularly if a portable power is wanted, it will prove almost indispensable. The power will be found convenient for many purposes besides threshing—such as sawing, cutting straw, &c., &c.

From what we have seen of this machine—and we have witnessed the power in operation while threshing different kinds of grain, and sawing wood—we have no hesitation in recommending it to our readers. It is constructed on the "endless chain" principle, and if *properly manufactured*, we are confident it will give good satisfaction. It combines several important advantages—being cheap, portable and durable, and easily attached to different machinery. Manufactured by H. L. EMERY, Albany, N. Y.—to whose advertisement, published in the appropriate department of this number, we refer the reader for further information, embracing numerous testimonials, price, &c.

## MANAGEMENT OF BEES.

BY ALVIN WILCOX.

MESSRS. EDITORS:—Having occasionally seen an article in the Genesee Farmer on the management of the Honey Bee, I have thought that more might be written on the subject, with profit to your numerous readers; and for that reason I offer a few remarks, which may perhaps be the means of inducing others to write on the subject, who are more competent to give proper information.

I have had much experience in the management of bees for the last twenty-five years—being a mechanic, and my work such as to admit of my seeing to them daily, if necessary. I have taken much pains to inform myself by actual observation and experiments, what was the best way to manage them profitably. In the spring of 1836, my brother-in-law and I had two hundred and twenty swarms, and we took from them that season over four thousand and six hundred pounds of box honey—being about twenty-one pounds to every old hive. That was what is called a honey season. The honey brought in New York market, over thirty dollars per hundred. The amount of box honey will vary from five pounds to twenty to the old hives kept—depending altogether on the season for honey.

Those who intend to buy, should, if convenient, begin with two or more swarms, as there is always some that will not produce more than they will use. Select early, last season swarms, as they are the best, if they have honey enough to winter. Rather small hives are the best for profit. In winter they require but little care more than occasionally looking to, and keeping the passage clear; and board and tub hives should have a place for the bees to pass out and in at two or three inches above the bottom board, as in winter there is a mist continually rising from the breath of the bees that accumulates in the top of the hive in the form of frost; in milder weather it melts to water and runs down and freezes and shuts the lower passage tight; then if there is not a passage above to admit air the swarm will suffocate.

At the commencement of warm weather in the spring they should be examined, the bottom boards cleaned off, and if any swarms are feeble as to amount of bees it is best to give them but one place to enter, as it enables them the better to guard against robbers. Bees are the most liable to rob each other the first warm weather before they begin to gather honey. If they begin to rob a hive, the best way is to take it up, as I never had a swarm amount to any profit after the robbers had gained free access to the honey. It is very seldom that robbers injure a healthy, good swarm.

*West Bloomfield, N. Y.*, 1849.

IDLENESS.—Said the distinguished Chatham to his son, "I would have inscribed on the curtains of your bed and the walls of your chamber, 'If you do not rise early you can never make progress in anything. If you do not set apart hours of reading; if you suffer yourself or any one else to break in upon them, your time will pass unprofitable and frivolous, and unenjoyed by yourself.'

## NOTES ON THE FEBRUARY NO. OF THE FARMER.

Your leading article on the subject of Agricultural Schools, is just and to the point. It is to be lamented that farmer's sons, who must forever compose the great bulk of community, are to have no better education than can be picked up by a few month's desultory teachings of perhaps beardless boys and untaught pretenders, who often officiate in our common schools; many of whom themselves learn B, while they are teaching their pupils A. The subjects taught in a properly regulated Agricultural School, will not simply relate to the *ic's* and *ate's* of science, but to all the parts of practical knowledge, that compose and create the business man and render them fit for our future Legislators and Governors. Is it not to be deprecated, that the whole of our legislative concerns have to be managed by the learned professions, one half of whom don't know a clevis from a coulter, and but little of the practical wants of community? In the name of common justice let it be once tried, if only as an experiment.

*Cabbage.*—The analysis you gave of the plants of the cabbage tribe, show from their constituents, why their decomposition in cellars and pits are so offensive and deleterious. They contain the elements to form the most deadly miasmata. We knew a family to perish by a most malignant fever, in an entirely healthy neighborhood. On searching for some local cause, a temporary pit under the floor was found, containing a decaying mass of cabbage and turneps, sending forth the most deadly exhalations. Cellars should early in the spring be thoroughly cleaned of every description of vegetable, and well ventilated.

*Golden Dreams.*—Your correspondent, in his speculations upon the amount and result of the great influx of the precious metals; must have been indulging in a dose of exhilirating gas. He underrates or overrates every point. His estimate of the circulating medium of the world is too low by half. If he refers to gold only he is nearer the truth. The produce of the mines of Europe and America, are at the present time less than $30,000,000 annually. The precious metals have not increased as fast in proportion as population, since the year 1815, the period of the termination of the great wars of Europe and America; hence the general decline of prices since that time. The precious metals as a circulating medium are daily declining in amount, from the great demand for the uses of the arts. The amount required to absorb bank paper, in case it should become extremely plenty, would consume over $400,000,000 in Europe and America; quite an item for the "golden shower," and when we consider that were the agrarian system to prevail, and all the gold and silver in the world were equally distributed, there would not be quite *seven dollars* per head; there would be lee-way for a good many drops of the golden shower, before we should all go mad as he prognosticates.

In the commerce and exchanges of the world, there must be something to represent property and value, and it matters not whether it is gold or rags, so long as the conventional notions of the world call it good. Tommy Nokes' paper is good only as far as Tommy Nokes is known, but the auriferous bars and coin are universal, and will crowd paper off the boards, if it becomes plenty. The value of gold and silver is in exact ratio to its scarcity and *vice versa*.

The mind of man is but too prone to be on the alert to speculate on human credulity and take an unfair advantage of every monetary mania. Kingdoms and nations have their rise and fall as well as families and fortunes, commercial and agricultural affairs; it is one of the conditions entailed on the affairs of this world, and from the long depression of business affairs, we will not undertake to controvert the opinion of your correspondent, that it requires but a small dose of stimulus, to awaken a spirit of speculation, in the dormant energies of our excitable population. Yet we are skeptical that it will be a tornado that will annihilate all land-marks of propriety. We do not believe that it will be any "great shakes of a shower after all."

S. W., who is your constant and generally reliable correspondent, in your February number twice uses the word *alluvial*, as applied to the soil of the Western country, not in a correct sense, scientifically speaking. Alluvial, strictly, is the recent deposits of rivers, lakes, and descending currents, and known as "intervale," while the great mass of soil or *drift* is a remote deposit, the result of the last great convulsions that swept over the globe and anterior to the existence of animal life, or the present order of vegetation, and is denominated as *diluvial*.

*Pea Bugs.*—We should like to know what advantages A. H. promises himself, in keeping peas corked up in a bottle for two years. The objection to sowing buggy peas is not that they are thus distributed in the field, assisting future propagation, as their number must be utterly insignificant—but that the bug destroys the germ and it fails to vegetate. The mischief is done by the insect in the larvæ state, and that process would go on, as well in the bottle, as in the bag.

*Butter and Butter Making.*—Mr. Emery's recommendation of the use of the Lactometer, for testing the value of milk, should commend itself to every dairyman and farmer. When we consider that two cows of equal fine proportions and giving equal quantities of milk, one may be worth $30 and the other only $15, relatively as to the *quality* of milk, the importance of an instrument to immediately test the fact, is of great consequence.

In the experiment stated in relation to the Kendall and Atmosperic Churns, the first is made to produce 7½ ounces to the pound more butter than the latter, with equal quantities of cream. If this is true and was a fair experiment, the result must be fatal to that invention and result in an immense loss to the purchasers of that right, as it is said the patentee has realized $100,000 from his sales.

*Wire Fences—Again.*—Your talented correspondent T. C. Peters, suggests another variety of this new "Boston notion," and of a much cheaper construction. We think the stakes intervening between the posts, if not made of a more indestructible material than any we are acquainted with, would prove but a broken reed; in short we must be permitted to remain a doubter as to its applicability to farm fences, except in the prairie country where they have no other resource. Yet its expense would not ruin one to try it. An ounce of trial is worth a pound of speculation.

*Drill Husbandry.*—We think favorably of the process of drilling in wheat and all small grains; if for nothing more than for the advantages of the deep and perfect planting of the seed. In those fields

infested with red root and other noxious weeds, it would be invaluable, as it would allow the harrow, or hand hoe to destroy the whole mass of plants previous to their seeding, except in the drills, which might be hand weeded.

*Lunar Influence.*—Your correspondent H., in answer to Mr. D., seems to us to be engaged in that unprofitable contest—trying which can do the other the most harm; a course more to be tolerated in the breach than in the observance. His articles on other subjects are interesting.

*Page's Portable Wind-Mill.*—We have often thought what a mighty and available power, sweeps daily over our heads, unused and unnoticed. Although the whole inventive power of man is tasked to multiply labor-saving machinery, yet the irresistable torrents of the viewless air, possessing all the potentiality of water or steam, is not harnessed by the will of man for his benefit. In all flat countries, which have to depend upon wells for the use of cattle, a cheap, simple and durable wind-wheel, with a leather strap and buckets, like a mill elevator, lifting the water into a trough, the overplus conducted back into the well, and situated at the corner of two or more fields, would double the value of the land for pasturage.

*Outlines of Fruits.*—Won't you, Mr. Editor, to oblige ten thousand of your readers, omit those uncouth outlines of apples, pears, &c., those cycles in epycicles, orbs in orbs—those unmeaning uniformities. There is no individual one of them but may serve for twenty varieties, and no person under heaven can individualize any one of them, sepatate from the letter press descriptions. They are unsightly and unprofitable to your readers, and costly to yourself. We pray you to reform it altogether.

*In Season and Out of Season.*—Permit me, Mr. Editor, to suggest to you the propriety of adapting your own and your selected articles to the season of the year in which they appear. To be talking to us of planting corn, when there is two feet of snow on the ground, or of housing and feeding cattle in dog days, is like "sweet bells jangled—harsh and out of tune." H. Y.

### GOLDEN DREAMS—GEOLOGICALLY CONSIDERED.

Mr. Moore:—Many persons are disposed to question the authenticity of the reports, relative to the almost inexhaustible supplies of Gold and other precious minerals in California and New Mexico; because they cannot see how, or why, such an immense deposit should only be found in that locality, and not otherwheres on the globe.

I am disposed to think, that gold is a more universally distributed metal than has generally been supposed, and many sands will be found to be auriferous, especialiy if in the neighborhood of primitive or metamorphic ranges. It is found in Mexico, South America, Africa, the Southern States, in Vermont, in the Wicklow Mountains of Ireland, and to the extreme north in Russia. Some persons suppose that it has been thrown up by volcanic action and fell a gold shower on the sands. Its production and location is simple and easily accounted for, if we look at the cosmogony of the earth, and observe its strict mechanical structure, from the lowest sedimentary rock to the surface; coming to the unerring conclusion, that every particle of the soil, is the result of the decomposition and abrasion of the plutonic and sedimentary rocks; quietly by the elements, and by the rushing of floods and currents, caused by a change of the poles; or variation of levels, from the upheaving, or depression of vast tracts of the surface. The source of these metals will be found in the great chain of mountains, that separate the Atlantic and Pacific Oceans, which are volcanic and probably green stone and basaltic. These upheaved and volcanic masses in cooling contracted and cracked, leaving fissures, which were subsequently filled by igneous action, with quartz and metamorphic matter, which contained the gold, injected by the mighty force acting from below, as is always found to be the case with the metals found in the primitive rock as a matrix.

Gold is often associated with sulphuret of iron, which is of easy decomposition, leaving the gold, which is indestructible, free, to be washed down to the valleys, by floods and rains and the great ecmmotions of the early periods of the earth's history. From the flattened and plated appearance of the washed gold of that region, it is evident that the agent of its distribution was the tremendous currents, that, during the unsettled periods of the earth's age, were so general over its whole surface, and the rushing of all loose, yielding and unattached matter, compounded of water, rocks, icebergs and abraded materials, sweeping with inconceivable velocity, at a time when the "earth was void and without form," which denuded and laid bare formations and strata, which had originally superior deposits, of more than 10,000 feet in thickness, and which being crushed and comminuted forms the present soil.

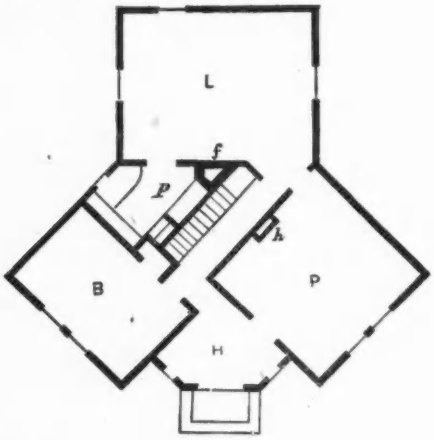
The direction of the last of these great currents, which finally left the drift or soil as it is now found, was in a direction on the Atlantic side of the great dividing ridge, (occasionally deflected by the mountain ranges a few degrees,) in a north and south direction, as the marked and striated rocks below the drift, every where give unmistakeable evidence. The precious metals found not in *situ*, but in the soil, can readily be turned up to the original deposit, by finding the course the great oceanic currents took on the Pacific coast and following the mountain ranges. Gold is generally found pure, occasionally alloyed with silver, but never with a salifiable base. It is found in all sizes and shapes, from hundred pound masses to the finest dust, in which case quicksilver is used to dissolve it, which is then driven off by heat.

Rearing Lambs.—I think the difficulty mentioned in the January number of the Farmer, page 46, may be obviated by the following process:—In the month of August take the lambs away from the ewes, with a few old sheep you wish to fat and kill, and put them in fresh feed, and the lambs will do better than to run with the ewes. The ewes will improve, and the lambs will winter as well as the old sheep, on the same feed. My word for that. Try it. *Wayne Co., Feb.*, 1849. E. F.

The Best Animals.—Of all animals, of whatever kind, those with the smallest and cleanest bones are generally the best proportioned, and covered with the best and finest grained meat. They are the hardiest, healthiest and best feeders; able to bear the most fatigue while living, and worth the most per pound when dead.—*Sel.*

PLAN OF A FARM OR SUBURBAN COTTAGE.

THE number and uses of the rooms in this plan for a small Farm House, are of the most common description, to wit: a parlor, a living room or kitchen, a pantry and a bed room, on the first floor; and three bed rooms, with closets, on the second. It is manifest that this singularly odd, yet more than ordinarily convenient arrangement, is adopted for the sake of the novelty of the external form—a form which will produce a very pleasing effect when finished in the most simple style, and which is particularly adapted to a high degree of ornamentation.




GROUND PLAN.

[H, Hall or entrance. P, Parlor. L, Living room or kitchen. B, Bed room. *P*, Pantry, with shelves. *f*, Principal chimney. *h*, Parlor chimney.]

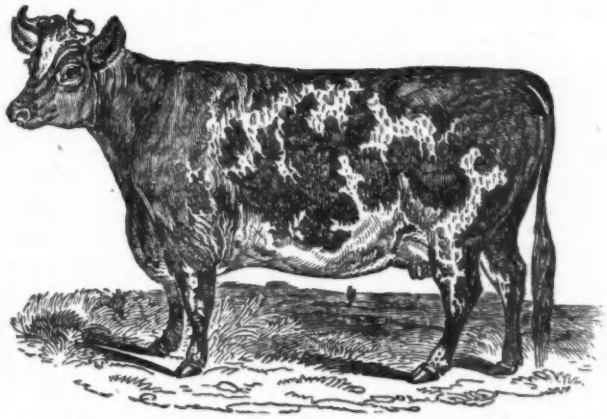
In this design the parlor is 13½ feet square, inside measure; the kitchen 13½ by 16½; the bed room, which has a small closet, 13½ by 9; the pantry 6½ by 8½; the hall or entrance 7½ by 7½; the passage 2 feet 8 inches wide, and the stairs 2 feet 4 inches. The bedrooms in the second story are of the same size as the 3 lower rooms, and directly over them. The space over the pantry affords room for two good sized closets. The parlor chimney ascends only to the chamber floor, and a pipe runs from it across the passage to the main chimney The rear gable is of the same height as the two front ones, but the roof is less steep, inasmuch as the back part is wider than the front parts. The wood-house should stand 20 feet in the rear of the building.

The cost of materials and labor, varies so much in different locations that it seems needless to attempt giving an estimate of the expense. It can be readily ascertained in any given place, when the style of architecture is determined on. S.

REMARKS.—The novelty of the plan here given by our modest friend "S.," will attract attention. We think the perspective front view is admirable—showing good taste, without that excess of ornamental finish so frequently attached to modern cottages. This plan will meet the wants of many grain-growing farmers. It will also make a handsome Suburban Cottage, as the style of architecture and finish may be varied to suit the taste of the owner. The cost will vary from $500 to $800—depending upon style of finish, cost of material, &c.—and is therefore within the means of farmers and others of limited abilities or acres.

We have several other original plans for farm cottages, recently received, some of which will be given in future numbers of the Farmer.

THOSE who prepare plans of Buildings for publication in the Farmer—and we invite all who possess a talent for designing to exercise it in that direction—will oblige us by making their drawings as perfect as possible. The size of each room should be given, and distinguished by some mark or letter, by which it can be easily referred to on reading the description of the plan. A careful estimate of cost would, also, add much to the value of such articles.



THE IMPORTED AYRSHIRE COW "ALICE."

### AYRSHIRE CATTLE.

It was our intention to give, in this number, an article embracing the history and qualities of this breed of cattle, illustrated with two or three portraits furnished for that purpose; but our pages are so crowded that we have only room for a brief notice.

The above is said to be a fair portrait of the imported Ayrshire Cow *Alice*, owned by C. N. Bement, Esq., of Albany—and will convey a good idea of the distinguishing points of a properly formed cow of that breed. *Alice* was awarded the first prize at the State Fair at Utica, in 1845. In a notice of her, published in the Journal of Agriculture, for August, 1848, Mr. B. says:—"Alice is now ten years old, has a calf by her side, and fills a common sized pail with milk night and morning, averaging from 18 to 20 quarts per day."

In his valuable treatise on "Domestic Animals," Mr. R. L. Allen says:—"The Ayrshire is a breed that has been much sought after of late years, from their reputation for fine dairy qualities. The milk is good both in quantity and quality, yielding, according to a recent statement of Mr. Tennant, of Scotland, who owns a large herd, fifteen quarts per day during the best of the season, twelve of which made a pound of butter. The product of the latter averages about 170 pounds per annum to each cow. Another authority says, on the best low-land pasture, a good cow yields nearly 4000 quarts per year. This is a large quantity, and implies good cows and extra feed."

Mr. Sanford Howard of the Cultivator, (who is considered good authority on the subject of cattle), thus closes an article on Ayrshires:—"Our conclusion is, from what we have seen of the various breeds of cattle, that if we wished to obtain a stock for the production of the greatest quantity of butter in proportion to the cost of keep or food consumed, we should make one trial at least with a selection of Ayrshires."

According to Youatt, "the origin of the Ayrshire cow is, even at the present day, a matter of dispute; all that is certainly known about her is, that a century ago there was no such breed in Cunningham or Ayrshire, or Scotland." Quade, who wrote the Agricultural Survey of Jersey, asserts that "the Ayrshire was a cross between the short-horned breed and the Alderney." And Count De Gourcey seems to be of the same opinion, as he remarks that "there is a considerable affinity between the two breeds." But Mr. Robertson, in his Rural Recollections, conjectures that they are either of the Holderness breed, or derived from it—judging from the varied color, or from somewhat better evidence, the small head, in which they bear a striking resemblance to them.

### MANAGEMENT AND PROFITS OF POULTRY.

BY H. S. CHASE, M. D.

Messrs. Editors:—Having seen several articles lately in the Farmer, in regard to the profits of keeping Hens, I am induced to give you briefly, my experience on the same subject.

On the 27th of March, 1848, I purchased four hens and one cock, and kept them until the 15th of November, when I killed them. During that time I received three hundred and eighty-six eggs, as the result of their laying. I fed them on grain which I purchased at the stores—seven pecks of corn at 75 cents per bushel, and one peck of oats at 50 cents per bushel. The account will stand as follows:

| | | |
|---|---|---|
| 386 eggs, average price 12 cents per dozen, | | $3 86 |
| 7 pecks corn at 18¾ cents per peck, | $1 31 | |
| 1 peck oats, | 12— | 1 43 |
| Nett profit of 4 hens for less than 8 months, | | 2 43 |

Average number of eggs laid by each hen, 96

My family is very small, which will account for the limited scale on which I tried the experiment. The fowls had the liberty of a barn, in which they were constantly kept, excepting about an hour before sunset, when they were let out; a part of the floor was taken up, however, that they might have constant access to gravel. Corn, lime and water were kept in vessels, where they could help themselves, at any time. I occasionally gave them grass, chickweed, &c., which they ate greedily.

As I need so small a number of fowls for my own use, I make a practice of killing them in the fall, and making a new purchase every spring, rather than be at the trouble of taking care of them through the winter. If farming was my profession, I should keep three or four hundred hens. No stock *pays* as well as this. *Woodstock, Vt.*, 1849.

### BENEFIT OF UNDER-DRAINING

BY ADIN MANLY.

Messrs. Editors:—In the December number of the Farmer my attention was called to the subject of Draining Lands, and believing the subject too little practiced or understood in this country, with your leave I will give you a trifle of my experience in Under-Draining.

I have now more than forty acres of wheat on which there is not a surface drain, the whole being under-drained. It is some six or eight years since I began the work. My first experiment was on a lot of about twelve acres, very wet and miry in the spring, so much so that we could not get on to it till late. It being more particularly designed for spring crops, it became necessary to have it drained.—Accordingly we commenced an under-drain through the dampest part first, until the whole was done. The result was most satisfactory, making the whole dry early in the spring, and rendering the clayey parts friable and easy to cultivate. During a freshet the water will run a day or two on the surface and then all disappear. Streams running from the road and other fields, coming in contact with the drains, immediately disappear. I have observed in wet weather the water would be running out at the lower end of the drain when no water was to be seen on the surface. I have been draining more or less for a number of years, with the very best results.

It is observed in digging drains that the subsoil is full of veins or water-courses, conveying the water considerable distances. I once observed, in digging a drain some thirty or forty feet distant from a small pond of water that had stood a long time, that when we got nearest to it, the subsoil which before had been dry was full of water and commenced running off, and in a few hours the pond was all gone. In addition to what is already stated, I have found a never failing spring of water, which by using about fifty rods of lead pipe, is conveyed to the lane where it is convenient for stock, and teams going to and from work—the benefit of which will pay for draining the whole farm.

Many other advantages of draining might be named, but enough for the present. This being the first communication ever sent by me to an editor, I will wait and see its fate. *Clarkson, N. Y.*, 1849.

Our friend acquits himself well for a beginner. He apparently understands that plainness and brevity are the essentials in writing for an agricultural journal. Now that his hand is in, we shall be glad to receive a brief statement of his mode of constructing drains, &c.

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Bone Dust.—An experiment, tried by Mr. Mortimer, of Silverton, furnishes a remarkable proof of the efficacy of this manure. At a recent meeting of the Netherexe Farmers' Club, Mr. W. Strong, of Powhay Mills, offered to give some bone dust to any agriculturist, to be tried against guano. Mr. Mortimer took the offer, and manured a piece of land, one part with bone, another with Peruvian guano, and a third portion with farm-yard dung, leaving a small strip without any dressing. The whole was planted with turneps, and we are assured by an agriculturist who has seen them, that while on the boned ground there are tnrneps larger than his hat, the part left unmanured has not one so large as his finger. The guano crop is finer than the dung turneps, but by no means equal for the size, though the superior, in thickness and rapidity of growth, to that grown where bone manure was used.—*Mark Lane Express.*

## Veterinary Department.

### PHYSICKING THE HORSE.

When a horse comes from grass to hard meat, or from the cool air to a heated stable, a dose, or even two doses of physic may be useful to prevent the tendency to inflammation, which is the necessary consequence of so sudden and great a change. To a horse that is becoming too fat, or has surfeit, or grease, or mange, or that is out of condition from inactivity of the digestive organs, a dose of physic is often most servicable; but the reflecting man will enter his protest against the periodical physicking of all horses in the spring and autumn, and more particularly against that severe system which is thought to be necessary in order to train them for work, and also the absurd method of treating the animal when under the operation of physic.

A horse should be carefully prepared for the action of physic. Two or three bran mashes given on that or the preceding day are far from sufficient when a horse is about to be physicked whether to promote his condition or in obedience to custom. Mashes should be given until the dung becomes softened A less quantity of physic will then suffice, and it will more quickly pass through the intestines, and be more readily diffused over them. Five drachms of aloes, given when the dung has thus been softened, will act much more effectually and much more safely than seven dramchs, when the lower intestines are obstructed by hardened fæces.

On the day on which the physic is given, the horse should have walking exercise, or may be gently trotted for a quarter of an hour twice in the day; but after the physic begins to work, he should not be moved from his stall. Exercise would then produce gripes, irritation, and possibly dangerous inflammation.—*Youatt.*

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Cure for Heaves in Horses.—A farmer tells us that he has recently cured two of his horses, which had the heaves badly, by the use of the following remedy: To three quarts of sweet milk add a teaspoonful of sulphuric acid, (oil of vitriol,) and mix with the horses' feed. Give at first three times a week, and afterwards once or twice as there may seem occasion for a few weeks longer. Our informant says there was little appearance of the heaves after the first week.—*Christian Alliance.*

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Lame Cows.—*Mr. Editor:* In 1802 or 1803 my father had about 44 head of cattle; the foot ail got into the stock, lost two oxen and one cow before we found a remedy; the hoof began to crack off at the back part and kept on gaining till it came off. We took a fine toothed saw and cut the point of the hoof off so that the hole was sufficient for it to discharge, and put on some tar or other healing ointment; the complaint begins in the hoof and cannot find any other way to discharge but to crack off; the back part without the point is cut off; the inside is dead and rotten and emits a great stench when cut off. We did not lose any after cutting off the point.—*Mass. Plowman.*

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Snow Balls in Horses Feet.—David Thomas, in the Albany Cultivator, says that soft soap well rubbed into the bottom of the hoofs when clean, and before the horses leave the stable, will prevent the collection of balls of snow.

## Spirit of the Agricultural Press.

MAPLE SUGAR.—A good man will make six or seven hundred pounds in three weeks. The man that took the premium at Auburn in 1846, kept all vessels clean. He run the hot sugar into conical vessels, having a half inch hole, plugged at the bottom, until the sugar was thoroughly hard; then put three layers of woolen cloth on top, and poured on a pint of water every morning for three weeks in succession. The water looked like brown molasses, and the sugar when done, like loaf sugar.

EARLIEST FOOD FOR BEES.—In a conversation the other day with a worthy and observing farmer, he remarked that the earliest food for bees, in the spring, is maple sap. He states that he has seen them gather round the sap troughs, in the woods, during the warm days in the spring, before the buds or tassels of the willow and other trees and shrubs had put out, sipping and making themselves glad with the sweets that they find there. It wouldn't be a bad plan, if a person had any maples in the vicinity of his hives, to tap them for the use of his bees.—*Maine Farmer.*

A GOOD SUBJECT FOR PREACHING.—We learn from the Birmingham (England) Gazette, that the late Mr. Thomas Ingraham, of Ticknell, near Bewley, by his will left a legacy, the interest of which is to be applied to procure three sermons in as many different churches, in or near Birmingham, yearly, "on the kind and merciful treatment of all dumb animals, but more especially that of the horse," and "that on Monday, previous to the preaching of such sermon, notice be inserted in the Birmingham Gazette, requesting the masters of families to direct their servants, having the care of their horses, to attend divine service on that day." It would be a good subject for preaching in this country, by men who can preach truth and duty without the stimulus of a premium from vested funds.

LARGE PRODUCTION. — Mr. Allen Dyer, residing in Byberry, this county, gathered and thrashed this season, from five bushels sowed, *ninety-three and a half bushels of wheat*, exclusive of the gleanings. The wheat was of the variety known as the Genesee white wheat, recently introduced into this neighborhood by George M. Ivins, and weighed sixty-six pounds to the bushel! With such a result as here recorded, this must be a most valuable variety of wheat, and ought to be generally known to and used by our farmers.— *Germantown Telegraph.*

DUTY ON AMERICAN WHEAT.—After the 1st of February, 1849, the fixed duty on wheat in England is to be one shilling per quarter, or about three cents per bushel; on flour it is to be four pence half-penny per cwt., or nine pence per barrel, of 200 pounds—equal to about eighteen pence per barrel.

EFFECT OF DOMESTICATION ON BIRDS.—Professor Low, in speaking of the effect of domestication on birds says, "They lose the power of flight by the increase of size of their abdomen, and the diminished power of their pectoral muscles and other parts of their body are altered to suit this conformation. All their habits change; they lose the caution and sense of danger, which, in their native state they possessed. The male no longer retires with a single female to breed, but becomes polygamous, and his progeny lose the power and the will to regain the freedom of their race."

CURIOUS MODE OF GRAFTING THE GRAPE VINE.—A gentleman in the neighborhood of Oporto, split a vine shoot, (white grape,) very carefully down the middle, cutting the bud in half, and then split a corresponding shoot on a black vine, and united them as in common grafting, and after many experiments, succeeded in making the graft grow, and the produce of the vine was white and black fruit on the same bunch, and on others variegated fruit.—*Foreign paper.*

A GREAT PRODUCT.—The Newark (New Jersey) Advertiser states that a farmer has raised this season on his farm at Clinton Place, in that vicinity, 603 bushels of white, or Belgium carrots to the acre—an amount of produce never exceeded in that climate.

TO QUIET BEES.—A correspondent of the Ohio Cultivator says that a little alcohol or almost any kind of ardent spirits, placed on the bottom boards around and under a hive of beligerent bees, will allay their fury, and cause them to cease fighting. If an article which sets the human race by the ears, will produce peace and harmony in a hive of bees, the fact certainly is anomalous.

RELATIVE COST OF MATTRESSES. — *Hair Mattresses.*— These are generally sold by weight, and cost from 50 to 75 cents per pound; 30 or 40 pounds will cost $15 to $20.

*Wollen Mattresses.*—30 pounds of wool, at 30 cents per pound, $9; 15 yards of ticking, at 12½ cents per yard, $1 50; labor, thread, &c., $2.75—total, $13.25.

*Feather Beds.*—40 pounds of feathers at 30 cents a pound, $12.00; 15 yards of ticking, at 12½ cents per yard, $1.87½. labor, thread &c., $2.75—total, $16.62½.

*Moss, or Corn-shuck Mattresses*, ready made, $12. The labor of properly preparing the shucks constiutes its main cost, and which cannot be done for less than the above price, all materials furnished.

*Cotton Mattresses.*—30 pounds of cotton, even at 8 cents per pound, $2.40; 12 yards of ticking, at 12½ cents per yard, $2.50; labor, thread, &c, $2.75—total, $6.65.—*N. O. Paper.*

RICH DAIRIES.—The Prattsville (Green Co.,) Advocate says: "One day last week, no loss then 280 butter wagons passed through our village; and one day this week as many more—making in two days 560. The average number of firkins was 20 for each wagon making a total of 11,200 firkins of butter. This multiplied by $15, the average value of a firkin of butter, amounts to the large sun of $134,000—and all from the dairies of Delaware and Otsego,

IMPROVED STRAINERS FOR PAILS.—Mr. William Cooley, of Geneva, N. Y., has invented and applied for a patent for a new and useful improvement of attaching a strainer to milk pails, which appears to be as valuable as the improvements lately made on churns. His plan is to have the strainer fit on to a tube or spout on the pail by a screw or slide, so that it can be put on and taken off at pleasure, thus rendering the strainer easier cleaned, and at the same time one strainer will answer a number of pails better than a sieve, and at one-fifth the expense.

CULTIVATION OF COTTON IN AFRICA.—It is said that an association formed at Graham's Town, in the Brirish colony at the Cape of Good Hope, for the purpose of promoting the growth of cotton in the colony, intends to send immediately to the United States for a few of the most approved gins, and to provide also a supply of those varieties of seeds which are supposed to be most suitable to the soil and climate of the colony.

WEEDS IN GRAVEL WALKS.—For more than 10 years I have used salt (but not in solution) for destroying and keeping down weeds in my gravel walks, with perfect success, and without perceiving that the application acted as a stimulant to reproduction. The contrary is the case. I sow the salt by hand in dry weather, and sweep it about thin, and as regularly as possible. I have seldom occasion to do this more than once in twelve months.—*English Paper.*

HOW TO CATCH HAWKS.—The following method for destroying these pests to the farmer is given by S. Webb, Esq. of Waldo county, Maine:

"Erect a pole, twelve or fifteen feet high, in a place where there will not be anything else near for them to light upon, and upon it set a common fox-trap on which they will alight. A strong rat-trap will answer the purpose, by tying it to the pole lengthwise, with the jaws raised above the end, the pole being a little leaning, so that the jaws will not fall together. When the hawk is taken, tie it on the ground near the pole, and its mate will be in the trap in a short time. The season is near for the hawks to re-appear, and if farmers do not wish to have their chickens destroyed by them, they will do well to adopt this method of putting a stop to their depredations.—*Scientific American.*

HOW IT IS DONE.—The editor of the Mass. Plowman, speaking of the progress of improvement among the farmers of the Old Bay State, thus explains the manner in which it is done:—

"Farmers *read* vastly more on the subject of farming than they have ever done. The prejudices against written agriculture are fading away as fast as farmers of practical knowledge are coming forward and giving the results of their own experience. They hold meetings and reason together on various matters relating to their business, and none can fail to improve by intercourse and free converse on any branch of farming."

TO TEACH A HORSE TO LIE DOWN.—First with some soft handkerchief or cloth tie up one fore leg; then with a stick tap him on the other and say "kneel." Sometimes by rubbing him on the head and patting him on the leg, you will induce him to lie down.—*Domestic Animals.*

## Editor's Table.

TO CORRESPONDENTS.—Communications have been received, since our last, from Myron Adams, H. Y., H. S. Chase, M. D., Horace L. Emery, R. B. Warren, Adin Manley, *, C. Paulk, E. F., Alvin Wilcox, S., L. Wetherell, B. Allen, Utilitarian, E. Hurd, B. F. Sweet, L. E. B., John Sheldon, F. W. Lay, W. E. W., J. Wells, J. H. Beech, M. D., F. Hurd, W. Hodge, S. W., J. A Pease, J. B. Ellis, Subscriber, J. G. Anthony, J. W. Dickinson, A. W., D., Clark Glidden, Arista, S. P. Chapman, Fenner, P. Palmer, R. K. Taft, Jas. P. Knowles, Henry C. Stoddard, W. B. Wheeler, J. Frye, jr., A. Western Farmer, W. S. Tupper, B. S. Crofoot, L. H C., Spencer Daniels, W. J. Pette, W., J. H. W., A Subscriber, J. Gibbons, and C. L. Chappell.

SEVERAL articles from correspondents, in type, but necessarily deferred—and a large number on file for publication.

ACKNOWLEDGMENTS.—We are indebted to J. W. LINCOLN, Esq., of Worcester, for a copy of the "Transactions of the Agricultural Societies of Massachusetts for the year 1847"—and for the transactions of the Worcester County Agricultural Society for the year 1848.....To Col. B. P. JOHNSON, for a copy of the Address delivered by Hon. L. F. ALLEN at the recent Annual Meeting of the N. Y. State Agricultural Society.....To MUNN & Co., publishers of the Scientific American, New York, for a pamphlet copy of the American Patent Laws.....To J. R. POWELL, Esq., for "Catalogue of the Mt. Airy Agricultural Institute, Germantown, Pa.; also an Essay on "Lime and Marl; their Agricultural uses"—by JAS. HYATT, Chemist of the above named Institution. .....To WM. WOOD, Esq., of Canandaigua, for "Report of the Meetings of the Association to promote Spade Husbandry, and Stall Feeding, on the estates of the Earl of Dartmouth, in Yorkshire, England."....Also to Members of Congress, Officers of Agricultural Societies, and several unknown friends, for various documents, pamphlets, &c.

WOOL GROWING AND STOCK RAISING IN THE MOUNTAINS.—The article on this subject, in the December number of the Farmer, has caused considerable inquiry. We have been unable to answer, by letter, the various inquiries propounded, for the want of both time and proper information—but have receieed from the senior editor, now at the South, an article in answer to those who have inquired upon the subject. The article was received too late for insertion in this number, but will be given in our next.

AN EXAMPLE.—A young man thus writes us from the Green Mountain State:—"Having been a subscriber the past year, I wish to continue the Farmer, as I am fully aware of its value. I am a young man; farming is the occupation I have chosen, and I wish to become a good and successful farmer. I think your journal will aid me very much, and I enclose you $1, the subscription for two years in advance, I am a hired man on a farm, and will inform you if I change my residence."

We predict that, extraordinaries excepted, the writer of the foregoing extract will, ten years hence, be the possessor and intelligent cultivator of a farm worth more than a trifle of California sand. We wish young men of the same views were more numerous in this nation of farmers. There is undoubtedly a "better time coming" in this particular—but the apathy and prejudice of many *fathers*, on the subject of *printed light*, precludes us from specifying the period.

DIRECT TESTIMONY.—A subscriber in Oakland County, Michigan, writing relative to his last crop, says:—"I shall have of wheat, barley corn and oats, (principally wheat,) on 43 acres, about 1750 bushels.—For the continued increase of my crops, *I am mainly indebted to the agricultural works and journals.* My neighbors say it is *luck*, but they have the same sun, soil and rain. They think they can cheat the land, and not have it cheat them in return—but in this they will be mistaken."

This "lucky" farmer usually grows from 40 to 43 bushels of wheat per acre, and other crops in proportion; while the crops of his "unlucky," anti-book-farming neighbors are annually decreasing—becoming "small and beautifully less." Comment is unnecessary.

READ the advertising department, or cover of this number. You will find something interesting, and which may prove valuable. The cover does not increase the postage on the Farmer—which please bear in mind. The postage on both sheets, unstitched, is the same as on a single newspaper.

ENCOURAGEMENT—*Progress.*—The accessions to the subscription list of the Farmer, during the past month, indicate that the cause of improvement is making rapid progress throughout the country. Agricultural books and periodicals are receiving favor with the most prominent and intelligent persons engaged in rural pursuits; and such works are creating a salutary influence among those who, through ignorance or prejudice have hitherto denied their usefulness. We might fill this whole paper with extracts from letters recently received, in favor of Agricultural publications, societies, &c., and containing gratifying evidence of the onward march of improvement in numerous sections of our widely extended country. Among various similar epistles, received within a few days, (written by gentlemen of different professions, but principally farmers,) we extract the following from a distinguished Clergyman now residing in Central Michigan—the Rev. ANSON TUCKER:

"Enclosed I send you two dollars for the Farmer, for 5 years in advance. Though not engaged in Agriculture, yet I look monthly, with great interest for the appearance of your exceedingly interesting and valuable journal—and as the science you are laboring to promote constitutes the grand basis of our national prosperity and glory, I hope you may be so sustained by an intelligent public that you shall never falter, never tire. I am convinced that not only every cultivator of the soil, but every *mechanic* and every *professional man*, should, as a matter of *principle*, as well as *interest*, take at least one well conducted Agricultural paper. Far better were it that such papers as the "Post" and the "Courier" should die, if possible, a thousand times over, then that one such journal should perish."

FROM CALIFORNIA!—The publisher acknowledges the receipt of $5 from California, not in *gold dust*, however. No doubt the volumes of the Farmer ordered will be of great service in procuring gold—provided their contents are carefully noted and properly applied in using the plow, hoe and spade, instead of the pick-axe. So mote it be.

SPEAKING of sending the Farmer abroad, we will add, *par parenthesis*, that those who wish to send copies to their friends in distant sections of this country, or Europe, the Canadas, &c., can be accommodated "on reasonable terms." In such cases we only ask the club price (40 cents per copy) —adding postage if sent to foreign countries, which is 12 cents on each volume. Several of our readers hereabouts are sending the Farmer to distant friends—having somehow obtained the impression that Western New York is the source and location of the handsomest, cheapest and best farmer's journal on this continent. As to the accuracy of such an impression, which is apparently becoming quite prevalent among the readers of the Farmer, we express no opinion. It is a subject on which we beg to remain *sub rosa*.

BROOME COUNTY.—In a recent letter, enclosing $10 on subscription to the Farmer, Mr. SILAS S. SAGE, of Windsor, writes us as follows:—"We have not in this section, until quite recently, enjoyed the facilities for market which are desirable for an Agricultural community. During the construction of the N. Y. and Erie Railroad, all kinds of produce have commanded good prices; and now we are within 12 hours travel of N. Y. City, so that if the citizens of this county turn their attention to dairying, as they probably will, I think the time is not far distant when Broome County Butter will not be many hours behind the far famed Orange County. I hope we may gain some hints from your truly valuable journal, to aid us in the selection of cows, the construction of buildings, and in procuring all the paraphernalia necessary for producing the gold, without going to dig for it in the sands of California."

—And which it shall be our constant endeavor, as it will be our pleasure, to furnish thee and all other kind friends and attentive readers of the Farmer.

A SUGGESTION AND REQUEST.—We wish to remind those of our readers who are interested in extending the circulation of the Farmer, that the approaching Town Meetings and Elections will offer a favorable opportunity for efforts in that direction. Those of our subscribers who can consistently do so, may aid the cause materially by taking their numbers with them to the Election, and obtaining subscriptions. It is a good time to "show the papers" to those who ought to subscribe—and we will cheerfully supply extra numbers to all whose copies are soiled or given away, on such occasions. Think of this, reader, and see what you can do for the benefit of your fellow townsmen, in thus promoting the circulation of the Farmer and similar journals.

# HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

## THE SEASON'S CALL.

"The works of a person that builds begin immediately to decay—while those of him who plants begin immediately to improve."

SHENSTONE, the poet and lover of rural scenery, was the author of the above truthful quotation. As soon as the work of the builder is completed, from that moment commences the slow, yet sure work of decay. Every year, every day, its beauty diminishes and its value lessens, until the new has become old, and the costly edifice is a heap of ruins. But, he who plants may see the work of his hands constantly improving until his eyes have become dim with age: he raises a monument under the shade of which future generations may repose, and bless his memory. The acorn planted in boyish sport may shade and shelter declining manhood, and sing its sad requiem while dust returns to dust.——He who not only plants, but takes good care of what he has planted, does much by his example to spread a taste for horticultural pursuits, and to correct the bad habits of his neighbors.

With this month commences the work of the Gardener and the Horticulturist. The true lover of fruits and flowers begins his work with increased knowledge and new zeal, after the long repose of winter. The "foliage, fruits and flowers," he loved when he beheld their beauty, appear now even more lovely, as he sees naught around him but leafless trees and half-frozen earth—drear as a new made grave. He considers how much even the violet and the daisy, and their companions in beauty, add to the happiness of man—and as he contemplates, sighs for their return. To such we have nothing to say—their inquiring minds—their cultivated tastes—their watchful eyes—will note THE SEASON'S CALL.

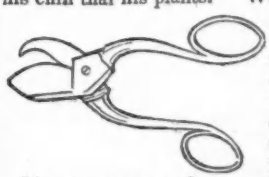
But there are those, who when admiring the neatly kept and productive gardens of their neighbors, and contrasting them with their own, resolve that another season shall witness an improvement in their own practice. The rich pass the humble cottage of the poor, and feel proud in contrasting its whitewashed planks with their own stately walls—and yet, its neat flower yard—its running roses, and honeysuckles, covering its sides and shading its windows—give it a look of beauty and a sweet-home air that all their wealth, so lavishly expended, has failed to procure. They thus learn that there are pleasures WEALTH cannot purchase, and determine to learn that art which can make a paradise of the poor man's cot.

There are those too, who have considered themselves too poor to attend to aught save the necessaries of life. They pass the cabin of the poor widow—the abode of the fatherless: they behold her otherwise unsightly abode rendered pleasant by the masses of white and scarlet runners that not only hide its deformity, but characterize it as the abode of refinement. The poor thus learn there are pleasures of which POVERTY cannot rob them, and go home in love with the art that can make pleasant the abode of poverty, and beautify the widow's hut.

It is such we would remind of THE SEASON'S CALL. Much depends upon commencing with the season. The following matters claim attention the present month.

## PRUNING.

Although this operation can be performed at any time during winter, yet we consider the beginning of March the most favorable season, particularly for peaches and apricots. All gardening should be done with neatness, but above all things, let your pruning be neatly done. We have seen trees "*pruned*" that looked as though cattle had been "*browsing*" among them. When you wish to remove a shoot, do so by means of a clean sloping cut, at the back of a bud, as seen in the figure. As soon as the bud pushes this wound is readily healed. To do this, well, however, the operator must have a keen knife. We give a figure of a proper *Pruning Knife*. "Those things," says THOMPSON, of the London Horticultural Society, "which some men call pruning knives, blunt and notched, a sort of cross between a file and a handsaw, used for grubbing up weeds, drawing nails and trimming roots, are never seen in the hands of a man who understands his business or attends to it. To a gardener his pruning knife is as much an object of solicitude as his razor. Indeed, of the two, he would rather hack his chin than his plants." We give also a figure of *Pruning Scissors*, so well adapted to pruning roses, shrubs, and for cutting flowers. We would particularly recommend them as a useful and convenient implement for ladies.*



If trees are properly pruned from the beginning, a pruning knife will perform all the necessary thinning out, &c., annually, and the butchering system so much practiced, of cutting off large limbs, will be avoided, and the trees will not only present a more pleasing appearance, but will produce a finer crop of fruit. The "shortening in" system, recommended by Mr. DOWNING, and others, and which we have seen practiced in the South of Germany as long as we can remember, answers well for Peaches.

Grape Vines that have not already been pruned, should be attended to first; and nothing will repay a judicious pruning better. The crop will be larger, and the flavor of the grape much improved. Currants and Gooseberries should be pruned rather close, in order to get perfect fruit. Deciduous ornamental trees, shrubs and roses should now be pruned. Ornamental trees only require the decaying and irregular branches to be cut away. With few exceptions, decideous shrubs and roses require annual pruning. (For particular and specific directions for pruning, see former volumes.)

## CUTTINGS.

Cuttings of hardy trees, shrubs, &c., should now be made. The following will grow with proper treatment, and will save much valuable time which would be necessarily required in propagating them by layers in the summer—besides, cuttings, as a general thing, make the best plants. They may be

* These implements may be obtained of Rapaljee & Briggs, Rochester, H. L. Emery, Albany, N. Y., and at most of the Agricultural Warehouses.

kept in a cool cellar, coverd with sand until time to plant them. Cuttings of evergreens should be properly shaded, and kept in frames.

*Trees, Shrubs, Vines, &c.*—Quinces, Grape Vines, Gooseberries, Currants, Plaanus, Populus, Salix, Kerræ, Cornus, Deutzias, Eunymus, Hibiscus, Hydrangeas, Privet, Loniceras, Ribes, Spiræas, Viburnums.

*Evergreens.*—Cedrus Dedora, Juniper, Arbor Vitæ, Yews, Aucusas, Box, Evergreen Euonymus, Laurels, &c., &c.

*Roses.*—Boursault, for stocks; almost all the Climbing Roses, Hybrid Perpetuals, Hybrid Chinas, Noisette, and other Chinese varieties

### SCIONS.

Scions should be cut now. Apple, pear and plum scions will keep best covered with moist sandy loam, or sand, in a cool situation. Cherry scions we have found would grow better by laying them on the cellar floor, even should they get slightly shrivelled. We hardly ever miss one kept in this way. We cannot agree with the article published last month, and which inadvertently passed without comment, headed "*Preserving Buds and Grafts*," by T.G. YEOMANS. We have seen thousands of scions ruined kept in saw dust; and we also saw a statemen to the same effect in the Albany Cultivator, by our friend HILDRETH, whose opinion and judgment can be relied upon. There may be some instances where scions keep well in sawdust, but we would not recommend it as a safe mode of preserving them.

### GRAFTING, TRANSPLANTING, &c.

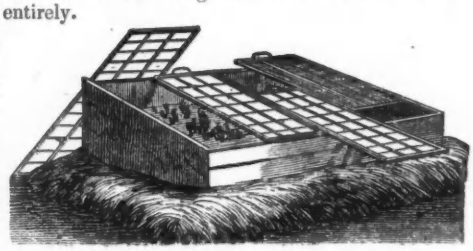
As soon as the weather will permit, cherries should be grafted. Last year we performed this operation before the frost had left the ground, with entire success. Plums should be done next, and then follow pears, apples, &c. Root grafting should be finished as soon as possible, before the busy season commences.

Transplanting of trees, &c., should be commenced as soon as the ground is in proper order. Currants, gooseberries, and cherries should be attended to first; and among the ornamentals, Daphne, Pyrus Japonica, Indus Trees, Magnolia Conspicua, and Saulangiana, Spiræas, Lonicera Tartiraca, Lilacs, &c.

Coverings of bulbous roots, herbaceous plants, strawberry and raspberry beds, as well as any thing else that had any protection during the winter, should be removed as soon as the frost leaves the ground.

### THE VEGETABLE GARDEN.

HOT BEDS.—Every one should have a hot bed, if it were only to forward plants for the garden. The too prevalent opinion is, that they are expensive articles and difficult to manage, requiring the skill of the professed gardener. Both suppositions are entirely erroneous. A hot-bed may be constructed by any man of ordinary ingenuity. A frame of about 12 feet long and 6 wide, which will allow of 3 sashes, each 3 feet wide will be found large enough for any family. It should be made of common two inch plank—the back about 3 feet high, the front about half that, the ends having a regular slope from back to front. This will give an angle sufficient to throw off rain, and give the full benefit of external heat and light to the plants within. If the beds are narrower, the front must be higher in proportion. The sides and ends are simply nailed to a strong post, four inches square or more, placed in each corner. For the sashes to rest and slide upon, a strip 6 inches wide is placed across the frame, the ends morticed or sunk in the sides of the frame, so as not to cause a projection. The sashes are made in the ordinary way, but without cross bars; and in glazing, the lights are made to overlap an eighth or quarter of an inch, to exclude the rain. Such a frame, costing but a mere trifle beyond the labor will last for years, and furnish all the cabbage, tomato, celery, cauliflower, egg, pepper, melon, and cucumber plants needed—with a sprinkling of early radishes, &c. Where so large a frame may not be wanted, an old window may be used for sash, and all expense of glazing be avoided. The annexed figure will convey an idea to those unacquainted with it. One of the sashes is moved down as in admitting air and the other laid off entirely.



Hot beds should occupy a dry situation, where they will not be affected by the lodgment of water during rains or thaws. They should be exposed to the east and south, and be protected by fences or buildings from the north and northwest.

Where it is intended to merely grow plants for transplanting to the garden they may be sunk in the ground to the depth of 18 inches, and in such a case require not more than 2 feet of manure; but when forcing and perfecting vegetables is designed, a permanent heat must be kept up, and the bed must be made on the surface, so that fresh and warm manure may be added when necessary. A depth of three to four feet of manure will in such cases be wanted. Manure for hot beds requires some preparation. It should be fresh stable manure, placed in a heap, and turned and mixed several times, promoting a regular fermentation. It is thus made to retain its heat a long time; otherwise it would burn and dry up, and become useless.

The mold should be laid on as soon as the bed is settled, and has a lively regular-tempered heat. Lay the earth evenly over the dung about six inches deep. Radishes and lettuce require about a foot of earth. After it has lain a few days it will be fit to receive your plants, unless the mold has turned to a whitish color or has a rank smell, in which case add some fresh mould for the hills, at the same time vacancies should be made to give vent to the steam, by running down stakes.

Those who wish to force cucumbers, &c., should begin, if the weather is favorable, by the first of March. For raising plants, the middle is time enough.

Having been requested to furnish information in regard to the construction of hot beds, we think we have presented the matter in so plain a manner that the mere novice in gardening may construct one.

LETTUCE and EARLY PEAS may be sowed as soon as the ground is open.

POLES for Beans and other Climbers should be made ready for use.

### OSAGE ORANGE FOR HEDGES.

It is pleasing to observe that with the general advancement of horticulture, the unsightly rail fences are rapidly disappearing, and making way for the various kinds of hedge plants. As yet the majority of farmers are not convinced of the economy of "clearing away" their favorite "land-marks," notwithstanding they require, every two or three years, as much outlay, (taking time and cost of timber into consideration,) as would the purchase of seeds and planting a hedge—and nothing adds so much to the beauty and value of a place as a well planted and properly kept hedge. We consider the outlay better than bank or railroad stock.

The Osage Orange has within the past year been the subject of much discussion in the horticultural and agricultural publications, and we have of late received several communications making inquiries as to the best mode of sowing, planting, &c., and we present such facts on the subject as our space permits.

The vigorous growth, bushy habit, shining leaves and strong sharp spine of this plant are well calculated to make it not only a very ornamental, but also a very resistive body. Our experience does not warrant us as yet to recommend it for extensive planting in the Northern States, although it is said there is a hedge near Boston that has proved quite hardy.

The appearance of the plant or tree, is not unlike the true Orange. The above engraving, (from the Horticulturist,) is a correct representation of a small branch. It is not an evergreen, but during the whole summer, and until late in autumn, the leaves are of a brilliant and shining green. The wood is very hard and strong, and the thorns so sharp and numerous that no animal will attempt to get through

The following directions for SOWING THE SEED, cut from the Prairie Farmer, corresponds so well with our experience, that we cannot do better than to recommend them to the perusal of our readers—if strictly followed, almost every seed will vegetate.

"All that can be done now about the seeds is to wait till spring unless they should be covered with damp sand in a box and exposed to the weather; but we doubt if any considerble advantage would be gained by this, as the seed does not need to be frozen at all. We made some experiments last spring in sowing the seed of the Osage Orange, and also of the Buckthorn—for they are similar in their habits of germination, and require to be treated alike, and we are satisfied the best way to manage them is this: when the ground becomes well warmed—say during the last half of May in this latitude, and proportionally earlier further South—pour npon the seeds warm water, of the temperature of 140° farenheit, or as warm as that the finger can be held in it, and let it stand in this water about thirty-six hours. Then pour off the water, and let the seeds remain *wet* in a warm room, for a week. If a little earth be mixed with them they will be kept damp somewhat easier, for they must in no case be allowed to dry. Then sow in a seed bed, covering them about an inch in depth; care must be taken that the seed bed does not dry, or the seeds will be killed. If the seed is old it will not all vegetate, the mode above sketched will bring up all that will come—the first season at all events. We used boiling water on one lot of seed, but it failed to come as well as that treated as above. This mode of managing all seeds with thick shells, may be followed. Many plants may be killed the first winter, in this latitude, but we are assured they will start again."

The following directions for PLANTING and TRAINING we copy from the Ohio Cultivator:

"The ground where the hedge is to be planted, should be plowed in the fall, if hard or in grass, so as to be mellowed by the frosts of winter. Set the plants in a single straight line, eight or nine inches apart; or if a very close hedge is desired, set them in a double line, one foot apart in each—six inches between the two rows, and the plants in one row to stand opposite the vacant space in the other, thus:

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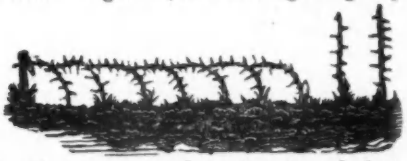
When set, cut off all the tops within about two inches of the ground. This will cause two or more shoots to spring up. The next year these are to be cut off within about six inches of the ground—which will cause many lateral shoots to form, and thus make the hedge thick and close. Or, if the plants are set in a single line, the following is a good plan:



When there are two or three stems to each plant, cut to within six inches of the ground all but one to each plant, which leave eighteen inches, then bend down the first to a curve not exceeding eight inches in height—fasten it with a peg, and then twist the top of the next plant under the curve of the first, as seen in the engraving."

## EDITORIAL CORRESPONDENCE OF THE FARMER.

### A RAMBLE IN PARIS.

*New Year Holidays in the French Capital—The Revolution—Louis Napoleon—The Jardin des Plants, and its collection of Trees, Shrubs, &c.—Jardin d' hiuer*

Paris, January 5, 1849.

The change that has recently occurred in the political affairs of France, seems to have had no effect whatever in Paris. It continues to be the same splendid city—the great resort of science, fashion, and taste. The fearful conflicts and bloody struggles, at which we shuddered in America, but a few months ago, are, in the main, entirely forgotten, and Paris seems as beautiful, polite, and gay as ever. Her glittering shops and cafes are fitted out with a taste you will find nowhere else. The theatres, promenades, and other places of amusement, are still thronged with gay and fashionable pleasure seekers. I have spent the Christmas and New Year Holidays here; and have had an opportunity of seeing nearly the whole population of Paris in the streets and promenades—a mode of enjoyment that we rarely see in America. The fine trees that were unmercifully hewn down along the boulevards, are replaced by others.

The only thing that forces the remembrace of war or revolution upon one's mind, is the army of soldiery that are stationed in every nook and corner of the city, making it, throughout, a complete barracks. In every shop and cafe, you will see soldiers; in all the public squares companies are being reviewed; in the suburbs of the city, juvenile bands are practicing their music; and every public building is not only guarded but surrounded with soldiery. I believe it is estimated that the guard in this city alone nearly equals in numbers the immense standing army of Great Britain. How France can bear such a weight beside so many other great public institutions of arts, science, charity, &c., is a problem for her most sagacious politicians to solve.

Louis Napoleon is fairly installed as first President of the Republic; and the National Assembly is quietly and industriously pursuing its legislative affairs. Very little is said of politics, except by mere politicians. How long matters may continue peaceable as at present, no one can say. The French are an uncertain people; and Louis Napoleon may, in six months, find himself as unpopular as any man in France. He has not selected for his cabinet such men as it was expected he would. He has given the preference to men no way prominent in State affairs. Perhaps in this he was wise.

Guizot has just published a small work on "Democracy in France," that meets with a good deal of approbation.

Among the multitude of attractions presented to the stranger here, the *Jardin des Plants*, has been to me the most interesting.

The immense collection of trees, plants, and animals here has been accumulating for upwards of a century—since the days of Louis XIII. I spent a day in it; and I could have spent a week delightfully. Indeed, I had but a passing glimpse at the various departments. I have visited no botanic garden so satisfactory to the student or visitor as this. In those of England they usually aim too much at producing a fine landscape, instead of arranging plants in such a way as to be readily seen and examined by all. Here each family of plants occupies a separate bed or compartment; and all are legibly labelled. The original plantation of trees occupies a beautiful hill, commanding a prospect of the whole houses and gardens of the institution, and the adjacent parts of the city. Here is a noble cedar of Lebanon, planted by Jassieu, in 1735; it is about 12 feet in circumference. There are also many young ones, ten or fifteen years old, that are very fine. I also saw many fine specimens of the new and rare pines, such as *excelsa, sabiniana*, &c.; also a beautiful tree of the new and much-admired *taxodian sempervirens*—one of the most elegant evergreen trees I have seen. The largest and oldest Pawlonia in Europe is here. It is now twelve to eighteen inches in diameter, and covered with blossom buds. I noticed, also, fine specimens of several of our American oaks—of our White Pine, Buttonwood, Hemlock, &c. I saw a Weeping Sophoro here that is remarkably graceful, and must occupy a prominent place among such elegant pendulous trees as the Ash, Willow, Birch, &c.; and, by the way, I have seen a new Weeping Birch, Weeping Willow, Black Weeping Thorn, Weeping Euonymus, and some others that will give us a most interesting collection of trees of this habit. In the Conservatory and Green House of the Jardin des Plants, are fine specimens of rare Palms, &c.; but I had little time to see them; and cannot now give you a detailed account of them. In the fruit department I was much pleased with the pear garden. Indeed, the pear trees are famous all over France and England, amongst cultivators, as being the best managed specimens known. The superintendant of this department, M. Cappe, has had the honor of managing his pear trees, as pyramids, better than any other in Europe; but I have seen better managed trees than his, and shall speak of them in future.

These are, certainly, beautiful models, and cannot fail to please all who see them. They are just what all garden pear trees should be in shape. They are planted in rows ten feet apart, and eight feet apart in the rows; between each drill is a small plot of strawberries; and between each bed is a walk of three feet; so that the bed itself is about six feet wide. The trees are, perhaps, eight or ten years old; about a foot in diameter; most of them ten to twelve feet high. The first tier of branches are within a foot or less of the ground; the next, two or three inches above it; and so on, forming a symmetrical pyramid. They are all on quince stocks. Another of the luxurious and delightful places of public amusement, is the *Jardin d' hiver*, an immense structure of glass, over 300 feet long, 200 feet wide, and 54 feet high. It is filled with fine plants. The largest Norfolk Island Pine in Europe is here, brought from the Jardin des Plants. It is now about forty feet high. Connected with this is a fine collection of paintings; and concerts are held in it once a week, to which the admission is very moderate.

Of the flower market, and many other things, I must tell you at a future time. P. B.

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Report of the Ohio Nurserymen and Fruit Grower's Convention.—We are indebted to M. B. Bateham, Esq., Editor of the Ohio Cultivator, for the above. It is a pamphlet of 64 pages, and contains much practical information. It is the most complete pomological report that has been published in this country, and Mr. Elliott deserves much credit for the industry and skill displayed in compiling it.

## RETARDING THE GROWTH OF FRUIT TREES.

Mr. Editor :—Can the blossoming of Peach Trees be retarded by any means affecting their roots *only?* Straw, coarse manure, &c., laid round the roots in winter will retain the frost in the ground several days, and perhaps several weeks after it is out of the ground not so covered. But will the blossoming of the tree be thereby retarded?

If the blossom buds are in a temperature sufficiently elevated, will they expand fully and *independently of the condition of the roots'?* If they will, then the first and second questions must be answered in the negative. In the latter part of March or fore part of April last, the end of a peach limb was covered up in a pile of fermenting horse-stable manure, which was thrown into my garden. In a few days after I extricated the limb, and it was in full bloom. The blossoms appeared to be perfect, though somewhat compressed from mechanical pressure. Not a blosom appeared on any other part of the same tree, (or any peach tree in the garden,) till more than ten days after. C. Paulk.—*Honeoye Falls N. Y.*, 1849.

Remarks.—As the immediate effect of heat will rouse the vital forces of regulation, so in the same degree will frost retard it. By covering the roots with straw, leaves, or saw dust sufficiently to exclude the heat from penetrating, the vital actions will of course be retarded for some time, and thereby the blossoming. Blossom buds will expand fully independent of the roots. We have cut branches of Peaches, Apricots, Almonds, Cherries, and even Lilacs, and put them in water in a temperate room, (the water must be changed regularly,) and in three or four weeks the blossoms were fully expanded. Of course they are not perfect.

A branch of a tree can be forced with a very good effect, independent of the temperature of the roots, (extremes excepted.) For instance, we have seen Apricots and Peach trees trained against a wall, and in order to get a succession of fruits, part of the trees were covered with glass, (common hot bed sashes were placed against the wall,) and by the time those parts that were not covered were in flower, that part under glass had fruits nearly half grown. The ground where the trees stood was not much frozen.

The heat of horse manure *caused* the excitability of vegetable action on your Peach limb, independent of the situation of the roots.

We may as well mention here for the benefit of those who are unable to raise Apricots, Nectarines, &c., on account of the ravages of the curculio, that trees planted against a house or wall, and glass placed before them, (during the time the curculio is in existence) will prevent this "great destroyer" from operating, and a sure crop of fruits may be expected. The fruits will be earlier and often larger.

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Superior Grafting Wax—The following mixture, viz;

1 pint linseed oil; 6 lbs. rosin; 1 lb. bees-wax, makes a better and cheaper wax, than any I have used made from rosin, tallow and beeswax. The oil will admit of a much greater proportion of rosin than the tallow. This wax will give entire satisfaction to those who use it—*T. G. Yeomans, in Horticulturist.*

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Return of Mr. Barry.—We learn by Telegraph, just as this number is going to press, that the Editor of this department of the Farmer, has arrived at New York, on his return from Europe. He will consequently soon be "at home;" and will probably make amends, in future numbers, for any lack of attention to inquiries of correspondents during his absence.

## BUFFALO HORTICULTURAL SOCIETY.

At the Annual Meeting of the Buffalo Horticultural Society, held at the Secretary's Rooms on Wednesday, February 14th, 1849, the President in the Chair, it was—

*Resolved*, That the Society proceed to the election of officers for the ensuing year.

Messrs. J. R Lee, B. Hodge, and C. F. S. Thomas were named a Committee to nominate officers.

Mr. W. R. Coppock, in a neat and appropriate address, respectfully declined being a candidate for re-election as President. Mr. W. B. Coleman also declined being a candidate for the office of Secretary.

The Committee reported the following list of officers, which were unanimously elected:

*President*—William R. Coppock.

*Vice Presidents*—Lewis Eaton, Orlando Allen, H. P. Potter, G. F. Pratt, H. W. Rogers, Abner Bryant, Joseph Dart, jr., W. W. Mann, Charles Taintor.

*Treasurer*—John R. Lee.

*Corresponding Secretary*—Benjamin Hodge.

*Recording Secretary*—C. F. S. Thomas.

STANDING COMMITTEES.

*On Flowers and Flowering Plants*—Messrs. C. F. S. Thommas, J. Dart, jr., and J. W. Brown.

*On Fruits*—Lewis Eaton, C. Taintor, and Lewis F. Allen.

*On Vegetables.*—H. W. Rogers, J. D. Sheppard, and H. A. Parsons.

On motion, it was resolved that the Gold Medal awarded to the Society by the State Agricultural Society, remain in the keeping of the President, to be handed over to his successor in office.

*Resolved*, That the Society's first and second premiums for the best display of Vegetables during the season of 1848, be awarded as follows:—To Mr. J. Keel, first premium, $5. Robert Dickinson, second, $3.

The propriety of offering premiums for the ensuing year was discussed and concurred in. The list will be published in due time.

*Resolved*, That the sum of $10 be paid to the publishers of the several daily papers and of the Western Literary Messenger, providing they publish the proceedings, reports and notices of the Society. Adjourned

C. F. S. Thomas, *Rec. Sec'y.*

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## GENESEE VALLEY HORTICULTURAL SOCIETY.

At a meeting of the Horticultural Society of the Valley of the Genesee, held February 5th, 1849, the following officers and committees were elected for the ensuing year.

*President*—Levi A. Ward.

*Vice Presidents*—John Williams, Rochester; Alfred Fitch, Riga; H. P. Norton, Brockport; Asa Rowe, Sweden; Zera Burr, Perinton.

*Corresponding Secretary*—Leander Wetherell.

*Recording Secretary*—J. A. Eastman.

*Treasurer*—James H. Watts.

*Committee on Fruits*—P. Barry, chairman; M. G. Warner, J. W. Bissell, S. Moulson, F. F. Backus. J. J. Thomas, Isaac Hills, Edward Roggin, Samuel Miller, H. P. Norton.

*Committee on Trees, Shrubs and Flowers*—Geo. Ellwanger, chairman; Francis Brown, jr., Wm. King, S. G. Crane, Henry Billings.

*Committee on Vegetables*—Jason W. Seward, chairman; James P. Fogg, J. Rapalje, S. E. Alden, L. B. Langworthy.

*Committee on Botany*—Leander Wetherell, chairman; G. H. Smith, J. W. Seward, J. M. Whitney.

*Committee on Entomology*—N. Goodsell.

*Executive Committee*—Levi A. Ward, John Williams, P. Barry, Geo. Ellwanger, J. W. Seward, L. Wetherell, N. Goodsell.

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Wire Fence.—Our Seneca Falls friend, who inquires for information on this subject, is referred to the articles of Mr. Adams, in this and the January number of the Farmer. We think his plan the best we have received; and we are of the opinion that it will *pay*. It is best, however, for those who have any doubts to try the experiment on a small scale at first. It is our intention to test the matter the present season, or have it tested in this vicinity, and shall of course take notes in order to report the result for the information of our readers.

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In Grafting take care that the bark of the graft and the bark of the stock meet and join on one side.

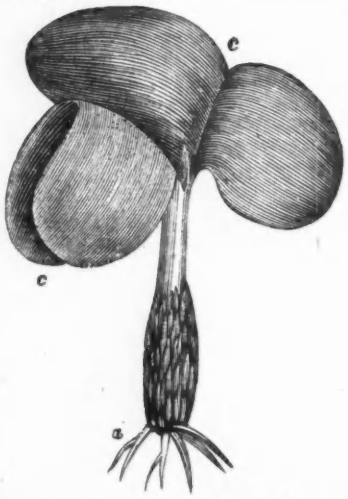
## Ladies' Department.

### BOTANY.—GERMINATION OF SEEDS.

[Continued from page 53.]

GERMINATION consists of the first chemical changes and vital action, which take place when a new plant is about to be produced.

"When the seed is planted in a moist soil at a moderate temperature, the integuments gradually absorb water, soften and expand. The water is decomposed, its oxygen combines with the carbon of the starch which has been stored up in the tissues. Thus, losing a part of its carbon, the starch is converted into sugar for the nourishment of the embryo, which now begins to dilate and develope its parts. Soon the integuments bursts, the radicale descends, seeking the dark and damp bosom of the earth, and the plumulule rises with expanding leaves, to the air and light. The conditions requisite for the germination of the seed are, heat, moisture, oxygen, air and darkness."




This cut represents a young dicotyledonous plant, with its radicale, *a*, developed; its cotyledons, *c*, *c*, appear in the form of large, succulent leaves; the plumule is just appearing as a minute point between the cotyledons.—*Rodgers' Scientific Agriculture.*

CHILDREN—Every romp with them is death to a score of gray hairs. Their games, moreover, present such a contrast to the rougher contest of bearded children, in the game of life, where money, power, and ambition are the stake, that it is refreshing to look at them and mingle with them, even were it only to realize that human nature yet retains something of its divine original.—*Selected.*

TWENTY years ago it was common to trim straw bonnets with artificial wheat and barley in ears, on which the following lines were written:

Who now of threatening famine dare complain,
When every female forehead teems with grain?
See how the wheat sheaves nod amid the plumes!
Our barns are now transferred to drawing-rooms;
And husbands who now indulge in active lives,
To fill their granaries may thresh their wives.

THE MOTHER.—A writer beautifully remarks that a man's mother is the representative of his Maker. Misfortune, and even crime, set up no barriers between her and her son. While his mother lives, he will have one friend on earth who will not listen when he is slandered, will soothe him in his sorrows, and speak to him of hope, when he is ready to despair. Her affection flows from a pure fountain, and ceases only at the ocean of eternity.

TO YOUNG LADIES—I have found that the men who are really the most fond of the society of the ladies, who cherish for them a high respect are seldom the most popular with the sex. Men of great assurrance, whose tongues are highly hung, who make words supply the place of ideas, and place compliment in the room of sentiment, are the favorites. A due respect for women leads to recpectful action toward them—and respectful is usually distant action, and this great distance is mistaken by them for neglect or want of interest.—*Addison.*

USEFUL KNOWLEDGE.—The education of our children is never out of my mind. Train them to virtue, habituate them to industry, activity, and spirit. Make them consider every vice as shameful and unmanly. Fire them with ambition to be useful. Make them disdain to be destitute of any useful knowledge.—*John Adams to his wife.*

APPLE CUSTARD.—To make the cheapest and best every day farmer's apple custard, take sweet apples that will cook, (such as every farmer ought to have through the summer, fall, winter and spring,) pare, cut, and stew them; when well done, stir till the pieces are all broken; when cool, thin with milk to a proper consistency, and bake with one crust, like pumpkin pie. Eggs may be prepared and added with the milk if handy, though it will do without. No sweetening is necessary. It may be seasoned with any kind of spice to suit the taste—the less the better.—H.—*Ohio Cultivator.*

CREAM that has been suffered to stand untll rancid, or slightly mouldy, which is often the case, should never be churned; it may make very palatable cream cheese, but abominable bad butter. Cream never rises from the milk after thirty-six hours standing. This may be proved by the lactometer. It becomes more solid, and thus appears thicker, but nothing is gained in quantity, and much lost in quality, by suffering it to stand too long before skimming.

SAGO CREAM.—This article, so grateful to the sick is prepared in the following manner:

Take a desert spoonful of good sago, and boil it in pure water till it is reduced to a jelly. Add a cup of sweet cream, and boil again. Beat up a fresh egg very light, and pour the sago on while hot. Sweeten and spice, with sugar and nutmeg, to your taste.

TO COOK A HAM.—Boil a comman size ham four or five hours, then skin the whole and fit it for the table; then set in oven for half an hour, then cover it thickly with pounded rusk or bread crumbs, and set back for half an hour. Boiled ham is always improved by setting it into an oven for near an hour, till much of the fat fries out, and this also makes it more tender.

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## Boys' Department.

### SUGGESTIONS TO FARMER'S SONS.

BY "UTILITARIAN."

Mr. Moore :—Feeling a deep interest in the advancement of the present tillers of the soil of our beloved country, and especially for those who are soon to compose the bone and sinew of the American nation, I am constrained to give a passing hint to the thousands of boys who may do themselves the honor to read your valuable paper—which hint was called out by a failure to obtain, as subscribers to the Farmer, men who will spend dollars annually for that kind of reading herein contemplated, and who still have the effrontery to call themselves *farmers*.

Our country is, at present, flooded with a newspaper and periodical circulation unequaled by any other country on the earth — and if the whole of the matter thus poured out upon our population were of a character calculated to give such information and instruction as should be of a truly beneficial nature, what amount of good might we not rationally expect would be realized from it? But, when we examine a large proportion of the reading thus circulated, do we find such as is calculated to be of any real benefit to our rural population, from which by far the greatest part of the patronage of the press is received? The farthest from it possible. Instead of such matter as shall inspire a love for the useful and praiseworthy, or furnish such information as will fit them for a noble discharge of the public and private duties of life, they are furnished with the sickly productions of imagination, which are often not only useless, but polluting to the minds of youth, while they create a distaste for the more substantial productions of more worthy authors — and the only reason for their extensive circulation is, that they cost but little.

But do we look upon a thief, who steals from us a penny, with any more respect than if he had taken a hundred dollars? This kind of trash, however, not only takes from us the trifling change we give to come into possession of it, but it steals our time, and that true force of character which constitutes the intrinsic wreath of a community, or a nation.

Will not the farmer's boys, who are soon to become the sovereigns of our extended country, strive to become men prepared to rule an enlightened nation with that wisdom which can never be drawn from works of fiction? *February* 13, 1849.

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How to Live Long.—A venerable minister who had preached some sixty-five years, being asked what was the secret of long life, replied, "Rise early, live temperately, work hard, and keep cheerful." Another who had lived to the great age of one hundred years, in reply to the inquiry how he had lived so long said, "I have always been kind and obliging, have never quarreled with any one, have eaten and drank only to satisfy hunger and thirst, and have never been idle." Above all things avoid law suits; they impair your health and dissipate your property.

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He that has never known adversity, is but half acquainted with others, or with himself. Constant success shows us but one side of the world; for, as it surrounds us with friends, who will tell us only our merits, so it silences those enemies from whom alone we can learn our defects.

### PREMIUMS FOR THE BOYS.

During the past month we have received remittances from quite a number of young friends. While we tender them our thanks for their efforts in behalf of the Farmer, we may be permitted to remark that the fact that their influence is exerted in favor of a work like ours, in preference to the tempting and too often senseless literary trash which is flooding the country, gives us greater pleasure than the receipt of the subscription money they have forwarded. It proves that their minds contain the germ, and a trifle of the fruit, of good sense and wise forethought—and certainly indicates enterprise and progress in coming manhood.

As an incentive to such of our youthful readers as are or may become agents for the Farmer, we make the following proposition :—To every boy or young man under 20 years of age, who will obtain 5 subscribers to the present volume of the Farmer, remitting payment according to our club terms, we will send a copy of Johnston's "Catechism of Agricultural Chemistry and Geology" — or any other work of the same price (25 cents,) which we offer in our advertisement of books. The Catechism is a valuable work of 75 pages, illustrated with engravings, &c. And to each one who obtains 8 or 10 subscribers, and forwards pay according to our club terms, (37½ cents per copy if sent to one address, or 40 cts. if the papers are directed to each subscriber,) we will give a volume of the Farmer for 1848, bound in marble paper covers and cloth back. The books can be sent by mail to any part of the country.


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The Publisher of the Farmer keeps constantly on hand a large assortment of the most popular and valuable works pertaining to Agriculture, Horticulture, and Rural and Domestic Economy, which will be sold at the lowest cash prices. The names and prices of a portion of the books are annexed :—

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American Veterinarian, by Cole. 50 cents.
Buist's Kitchen Gardener. 75 cents.
Buel's Farmer's Companion. 75 cents
Chaptal's Agricultural Chemistry. 50 cents.
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Domestic Animals, by R. L. Allen. Cloth, 75 cts.; paper, 50 cts.
Farmer's and Emigrant's Hand-Book. $1.
Fruit Culturist, by J. J. Thomas. 50 cents.
Gardener's Farmer's Dictionary. $1 50—leather, $1 75.
Horse's Foot—and how to keep it sound. 25 cents.
Johnson's Agricultural Chemistry. $1 25.
Loudon's Ladies' Flower Garden. $1 25.
Liebgig's Agricultural Chemistry, (new edition.) $1—paper, 75 cts.
Liebgig's Agricultural and Animal Chemistry, (pamphlet editions.) 25 cents each
Parson's on the Rose. $1 50. Prince on the Rose. 75 cents.
Rural Economy, by Boussingault. $1 50.
Stable Economy, by Stewart. $1.
Scientific Agriculture, by Rodgers. 75 cents.
Smith's Productive Farming. 50 cents.
Treatise on Milch Cows. 38 cts. Treatise on Guano. 25 cents.
Youatt on the Horse, (new edition.) $1 75.
Youatt on the Pig. 75 cents.
Catechism of Ag. Chemistry and Geology. 25 cents.
The Gardener and Complete Florist. 25 cents.
Knowlson's Comple Farrier, or Horse Doctor. 25 cents.

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THE NINTH VOLUME OF THE FARMER, for 1848, just completed, and for sale bound or in numbers, as preferred. It contains a larger amount of matter pertaining to Agriculture and Horticulture than any similar work of the same price ever published—and is illustrated with over eighty engravings Price, 62½ cents bound in boards and leather—or 50 cents in marble paper, with cloth backs. It can be sent by mail.

## CONTENTS OF THIS NUMBER.


Making and preserving Manure,..... 57
Bastard Fallows, and Culture of Indi n Corn,..... 59
The Plow, its history and improvements,..... 61
Smith's Hay, Stalk and Corn Cutter,..... 61
Another Chapter on Wire Fence,..... 62
Door Yard Fence,..... 62
Wheat and Chess,..... 63
Meterological Abstracts of 1847 and 1848,..... 64
Wheeler's Horse Power and Thresher,..... 65
Management of Bees,..... 65
Notes on Feb. No.—Golden Dreams, Butter and Butter Making, Pea Bugs, Wire Fences, and Drill Husbandry,..... 66
Golden Dreams, Geologically considered,..... 67
Page's Wind Mill; Rearing Lambs,..... 67
Plan of a Farm or Suburban Cottage,..... 68
Ayrshire Cattle,..... 69
Management and Profits of Poultry,..... 69
Benefit of under Draining; Bone Dust,..... 70
Physicking the Horse; Cure for Heaves; Lame Cows,..... 70
Maple Sugar; Earliest food for Bees; Grafting the Grape,.. 71
To Quiet Bees; Relative Cost of Mattresses; Rich Dairies,.. 71
Improved Strainer for pails; How to Catch Hawks, (and other items,)..... 71
Editor's Table, (embracing various notices,)..... 72

HORTICULTURAL DEPARTMENT.

The Season's Call—Pruning—Cuttings—Scions—Grafting,.... 73
Transplanting, &c.—The Vegetable Garden,..... 74
Osage Orange for Hedges,..... 75
Editorial Correspondence of the Farmer—A Ramble in Paris, 76
Retarding the Growth of Fruit Trees,..... 77
Buffalo, and Genesee Valley Horticultural Societies,..... 77

LADIES' DEPARTMENT.

Botany—Germination of Seeds,..... 78
Items in Domestic Economy,..... 78

BOYS' DEPARTMENT.

Suggestions to Farmer's Sons; How to Live Long,..... 79
Premiums for the Boys,..... 79


## ILLUSTRATIONS.


Elevation of Farm Cottage,. 68
Ground Plan of do.,..... 68
Portrait of Ayrshire Cow,.. 69
Wheeler's Horse Power and Threshing Machine,..... 65
Smith's Straw Cutter,..... 61
Illustration of Pruning,..... 73
Pruning Knife,..... 73
Pruning Scissors,..... 73
Figure of a Hot Bed,..... 74
Osage Orange, (2 figures,).. 75
Botanical Illustration,..... 78


## Market Prices of Agricultural Products.

**New York,** February 23—7 P. M.

FLOUR AND MEAL—Sales are to a small extent. 3,000 bbls. at 5.56 a 5.69 and 5.75. For pure 69 is freely paid. Included were 500 barrels in store at 5.50. Some inquiry for Western for the East. Meal is a little higher, $2.94 a 3$ for Jersey is asked. Rye Flour 3.44 a 3.50.

GRAIN—Wheat moderate inquiry. Sales 4,000 bu. Ohio at 1.15 and some Long Island at 1.10 a 1.15, Genesee 1.30 a 1 32. Corn 10.000 bu. N. O. at 52 a 55 for white southern and 62 for yellow, 65 for northern. Oats 40 a 42.

PROVISIONS—Market for pork rather heavy. Sales 6 or 700 bbls. mess at 10.75 a 11. Prime mess is nominal at 9.87. A sale of 500 was made yesterday at 10.25. Beef is quiet. Sales 80,000 lbs. smoked beef at 15 a 11. Lard is heavy. No change in butter and cheese. Tallow 8¼ and quiet.

ASHES—Sales 100 bbls. Pots at 6.37, Pearls, 7.50.

WOOL—Market firm and quiet.

**Rochester,** February 24, 1849.

FLOUR AND GRAIN.—Flour $5.50. Wheat, $1.12½ per bushel. Corn 44 cents; Rye 53; Barley 50; Oats 30.

SEEDS.—Clover seed, $3.50 a 4; Timothy, $2 a 3; Flax $1.

PROVISIONS.—Pork (mess) $13 a 14 per bbl.—in hog 5.50 per cwt. Beef, per cwt. $5—barrel 7 a 8. Butter 13 a 14 cents; Cheese 6 a 6¼. Hams (smoked) 7 cts. Poultry 6¼. Eggs 16.

SUNDRIES.—Hides (slaughter) 3½—Calf 10—Sheep Pelts 40 a 75. Salt, bbl. $1.25. Potatoes, bush., 37 a 50. Apples, bu. 37—dried 62½. Beans, bu., 75 cents. Hay, ton, $7 a 11.

## To Agents, Post-Masters and Subscribers.

AGENTS, Post-masters and other friends of the Farmer will bear in mind that we offer Premiums amounting to OVER TWO HUNDRED DOLLARS (in Agricultural Books, Implements, &c. at cash prices,) for subscribers obtained before the 20th of April next. We have not room to publish the list of Premiums in this number, but will send it, together with show bill, specimens, &c., to all who wish to compete.

We hope that *all* of our former patrons will renew their subscriptions, and get as many new subscribers as convenient. If each of our readers will take the matter in hand—and we earnestly invite all so disposed to obtain and forward subscriptions—much may be accomplished in every section of the country. Friends, will YOU SHOW THE FARMER TO YOUR NEIGHBORS AND ACQUAINTANCES, AND INVITE THEM TO SUBSCRIBE?


## THE GENESEE FARMER,

A MONTHLY JOURNAL OF

## AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c.

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